An Address on PELVIC ABSCESS.

Delivered at Birmingham at the opening meeting of the Midland Medical Society, Nov. 2nd, 1893,

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MR. PRESIDENT AND GENTLEMEN,—I consider it a great distinction to have been invited to deliver this inaugural address. When I looked down the list of those who have had a similar honour paid to them in previous years and remembered how almost everyone of them had made it an occasion for adding something of sterling and permanent value to the literature of our profession I realised, with much misgiving as to my competence for the task, how serious a duty I had undertaken.

In the address on obstetrics and gynæcology which I had the honour of delivering at the recent meeting of the British Medical Association at Newcastle I spoke of the debt that gynæcology owed to the enterprise of the modern abdominal surgeon in regard more particularly to the light that had thereby been thrown on the pathology, diagnosis, and treatment of inflammation of the Fallopian tubes. Remembering that my address this evening would be delivered in Birmingham, the city where for many years abdominal surgery received its chief impetus, it seemed to me to be natural and fitting that I should utilise the occasion for calling attention to some of the many *other* directions in which our knowledge of pelvic disease has recently been much advanced, and in which the advance has been due, if not entirely, certainly very largely, to the teachings of abdominal surgery. The subject I have chosen is pelvic abscess, or, to speak more correctly, pelvic suppuration, in the female.

Until quite recently all forms of pelvic suppuration were styled indiscriminately pelvic abscess, and our ideas as to their etiology and pathology were exceedingly vague. It was generally believed that there were two forms of pelvic abscess, the one, and more common, form having its seat in the pelvic connective-tissue, the other, and rarer, form being intra-peritoneal and being located for the most part in Douglas's pouch, where the pus, having in the first instance accumulated there by the law of gravitation, eventually became encysted by adhesions. The one was held to be the result of cellulitis, the other of peritonitis, both of which were regarded as idiopathic affections, capable of being induced either by exposure to cold (especially during menstruation and after parturition and abortion) or by direct injury received either during labour or in the course of surgical manipulations conducted through the vagina. The changes that have been brought about in our views respecting suppuration in general, and pelvic inflammations in particular, have of necessity affected our notions as to pelvic abscess. We now know that suppuration in the pelvis, as in other parts of the body, is always an infective process and can never have either a purely catarrhal or a purely traumatic origin. Neither cellulitis nor peritonitis can any longer be regarded as an idiopathic affection. Catarrh and injury may be, and often are, factors in their production, but they are not the essential factors. There must always be an infection of some kind. Our knowledge, too, of the *morbid anatomy* of pelvic abscess has received important additions. We now know that the immediate sources of pelvic suppuration are much more numerous than they were supposed to be, and that, although it may be convenient to retain the term "pelvic abscess" as a specific name for cases of suppuration in the connective tissue of the pelvis and as a provisional diagnosis in other cases of pelvic suppuration, when the precise locality of the lesion has not yet been discovered, the time has come to discard it as a general term, and to aim, in every case of pelvic suppuration, at a more exact diagnosis than the use of such a term would imply. I am no advocate for pretending to a refinement of diagnosis that is unattainable, but when I see a hospital physician never venturing further in the diagnosis of a skin disease than to call it an "eruption," another entering every inflammatory affection of the respiratory tract in childhood under the safe heading of "cough," and a third publicly objecting to any attempt at increased precision in the classification of pelvic suppurations and advocating the application of the old term "pelvic abscess" to them all, I cannot but feel that in this matter of diagnosis modesty and caution may be carried too far.

Abscess in the Connective Tissue of the Pelvis.

The simplest form of pelvic suppuration is that which occurs in the connective tissue, and it is this form to which I should like to see the use of the term "pelvic abscess" restricted. It will immensely facilitate our study of this affection if we recognise, once for all, that inflammation of the conective tissue in the pelvis differs in no way from inflammation of the same tissue in other parts of the body which are more accessible to sight and touch. I was glad to see the attention of gynæcologists very forcibly called to this point by Professor Wm. Keiller[1] of the University of Texas. Primary cellulitis, as we know it in other parts of the body, is always an acute affection and is always septic in its origin. Professor Keiller takes as an example the ordinary clinical course of a septic wound of the palm of the hand. The process in pelvic cellulitis is precisely analogous. "The cellular area of the pelvis is shut off from the perineum by the pelvic fascia. This strong aponeurosis is attached to the pelvic wall between the pubic bones and bodies of the ischia along that thickening of the obturator fascia known as the white line. From this it passes as a continuous sheet over the levator ani and coccygeus to the vagina in front and the rectum and coccyx behind. Behind the pubic symphysis it is closely blended with the vaginal orifice under the name of 'the triangular ligament.' All inflammatory exudation connected with the female genitals above the vulva takes place above this strong fascia; and, as in a septic wound of the palm of the hand the exuded serum or lymph is forced to find accommodation on the back of the hand by the strong palmar fascia and the way in which the skin is bound to it, so the pelvic fascia forces the exuded fluids in septic wounds of the deeper genitals to find accommodation in the loose tissue above it." This cellular area has for its upper boundary the peritoneum, which can be readily stripped from the whole of the pelvis except in the following situations—viz., the anterior surface and sides of the rectum, the upper part of the posterior wall of the vagina, the posterior surface and fundus of the uterus, the anterior surface of the body of the uterus, and the posterior surface of the bladder. As all these parts where the peritoneum is firmly attached are situated more or less in the middle line, it follows that the cellular area of one side scarcely communicates with that of the other except along the tract which lies between the upper part of the cervix and the bladder, so that cellulitic exudations are mostly limited to one side. The most common source of such exudations is septic absorption through lacerations of the cervix and of the upper part of the vagina, occurring during labour, the latter accident accompanying the use of the forceps much more frequently than is supposed. I have over and over again, in cases of pelvic cellulitis seen in consultation, found wounds of the vagina that had been entirely unsuspected by the medical practitioner in attendance and that had evidently been caused by the projecting edge of one of the blades of the forceps. Such wounds, if they remain aseptic, readily heal; but it often happens that septic matter finds its way into them, and then pelvic cellulitis results. Only less important than parturition in respect to the etiology of this affection are the various surgical measures practised on the vagina and cervix. Before the necessity of rigid aseptic precautions was understood and generally acted upon, the most trifling surgical proceedings in these parts were apt to be followed by an attack of cellulitis. With regard to abortion, I am inclined to believe that septic infection following it seldom, if ever, takes the form of pelvic cellulitis, for the simple reason that, there being no over-distension of the cervix or wounding of the vagina by the use of instruments, injuries to those parts are less likely to occur. This impression is abundantly borne out by my own experience. Upon examining the records of St. Thomas's Hospital for the past five years I find that during that period there have been twenty-two unequivocal and uncomplicated cases of cellulitic abscess in the pelvis. Of these not a single one followed abortion. Twenty-one were the result of parturition; and the

[1] American Journal of Obstetrics for September, 1893.

twenty-second, the cause of which was not discovered, occurred in the fifth month of pregnancy.

In connexion with this subject of abscess in the pelvic connective tissue Professor Keiller very properly calls attention to the *rôle* played by the lymphatic vessels and glands. He points out that nothing is more common as the result of a neglected septic wound of the foot or the hand than to have a suppurating gland in the groin or axilla, and asks whether it is "to be expected that the pelvic glands will always escape in vaginal or cervical wounds." I feel as certain as he does that they do not escape, and I can call to mind several cases where, from the position of the abscess, I have no doubt that there was suppuration of the hypogastric glands, those, namely, which surround the iliac vessels at the sides of the pelvis and receive the lymphatics from the cervix and the upper three-fourths of the vagina. "Of course," as Professor Keiller says, "we cannot palpate a large and tender gland" in such a situation, "and for this reason we are very apt to forget its presence."

Where do cellulitic abscesses in the pelvis usually point? In the great majority of cases the spread of the inflammation is in a forward direction, from the base of the broad ligament, where it starts, to the connective tissue lying beneath the peritoneum which forms the floor of the anterior pelvic fossa, stripping up the peritoneum where it becomes reflected on to the anterior abdominal wall, and forming a broad strip of induration along and parallel with the upper border of Poupart's ligament. When suppuration occurs, the skin over the induration gradually becomes œdematous, and pointing usually occurs at a spot almost immediately above the centre of Poupart's ligament. It will be seen from the accompanying table that of the twenty-two cases of uncomplicated

TABLE I.

Cellulitic Abscess in Pelvis, 1889–93.

Pointed above Poupart's ligament; right side	9
,, ,, ,, left side	9
Pointed over iliac crest	1
Opened before pointing occurred; abscess situated on posterior wall of pelvis	3
	22

cellulitic abscess treated during the last five years in the women's ward at St. Thomas's Hospital, the abscess pointed above Poupart's ligament in eighteen, nine times on the right side and nine times on the left. The inflammation is often described as "following the course of the round ligament," but I know of no evidence to show that the round ligament plays any part in determining the course of the inflammation. The study of frozen sections has taught us that, at the end of pregnancy, the broad ligaments have been drawn upwards by the growing uterus, so that the base of the ligament is at the brim of the pelvis and the peritoneum no longer descends laterally into the pelvis at all. The whole of the lateral space below the pelvic brim is, at this period, occupied by cellular tissue, the quantity of which has become enormously increased.[2] There is, therefore, no need to invoke the intervention of the round ligaments to account for the inflammation passing forwards from the base of the broad ligament to the tissues just above Poupart's ligament. These parts already lie in close juxtaposition, and the extension of the inflammation from one to the other really needs no other explanation.

In exceptional cases the inflammation passes round to the loose tissue in front of the bladder, and the abscess points above the symphysis, or, mounting up between the anterior parietal peritoneum and the sheath of the rectus, points at the umbilicus. In three of the twenty-two cases tabulated the abscess formed at the back instead of at the front of the pelvis, probably owing to implication of the hypogastric glands, and it was opened by making an incision above the anterior superior iliac spine and dissecting inwards, beneath the peritoneum, to the pelvic brim. It is probably in cases of this kind that the suppuration occasionally extends upwards along the subperitoneal tissue of the iliac fossa and even into that of the loin, pointing either at the iliac crest, as in one of the cases in Table I., or above it. The text-books speak of the pus in such cases following the course of the psoas muscle; but when matter burrows along this muscle it is not from a cellulitic abscess but from dead bone. It is along the bloodvessels, and other parts such as the ureters, that actually lie in the connective tissue of the pelvis and are accompanied by a prolongation of it as they enter and leave the pelvis, that the pus finds its way.[3] This is not only true of the cases in which suppuration extends to the iliac fossa and the loin, but also of those where the pus leaves the pelvis by the sciatic notch, or, passing beneath Poupart's ligament, points in Scarpa's triangle. In the former case it follows the course, not of the obturator tendon, but of the sciatic and gluteal vessels, and in the latter it is the femoral vessels, and not nerve or tendon, as is sometimes stated, that direct the course of the abscess.

It is commonly stated that cellulitic abscesses frequently burst into the rectum, the vagina, and the bladder. This statement appears to me to rest on very slender foundation. Many of the cases quoted in its support belong to an era when little was known of the pathology of pelvic inflammation, and on carefully reading them in the light of our present knowledge it is easy to see that at least a considerable number reported as cellulitic abscesses were really cases of intra-peritoneal suppuration originating in suppurative disease either of the tubes or ovaries. This is notably true of a case of my own, published twenty-two years ago, which, though I have now no doubt whatever as to its having been a case of intra-peritoneal suppuration from acute tubal disease, was described, in accordance with the crude gynæcological pathology of the time, under the heading of "pelvic cellulitis" and takes its place in Delbet's valuable monograph as a well-authenticated instance of the spontaneous opening of a cellulitic abscess into the rectum. At the same time it is only fair to say that there does not appear to be any anatomical reason why cellulitic abscesses should not occasionally discharge themselves into the rectum, the vagina, and the bladder, and that some of the cases in Delbet's collection appear to be genuine examples of such an occurrence.

Table II. shows, with regard to the twenty-one cases in which cellulitic abscess followed parturition, the period that elapsed between delivery and the pointing or opening of the abscess. It will be seen that, judging from the small number of cases here recorded, the usual time for the abscess to point is between the seventh and the twelfth week. The earliest period at which pointing occurred was five weeks, the latest fourteen.

TABLE II.

Period after Delivery when Abscess pointed or was opened.

Over	5	and under	6	weeks	..	..	..	..	..	..	1
,,	6	,, ,,	7	,,	..	..	..	..	..	..	4
,,	7	,, ,,	8	,,	..	..	..	..	..	..	2
,,	8	,, ,,	9	,,	..	..	..	..	..	..	3
,,	9	,, ,,	10	,,	..	..	..	..	..	..	5
,,	10	,, ,,	11	,,	..	..	..	..	..	..	2
,,	11	,, ,,	12	,,	..	..	..	..	..	..	2
,,	12	,, ,,	13	,,	..	..	..	..	..	..	1
,,	14	,, ,,	15	,,	..	..	..	..	..	..	1
					Total	..	..	..	..	..	21

The treatment of cellulitic abscess in the pelvis—i.e., of true pelvic abscess—is summed up in three words: incision and drainage. Abdominal section is here entirely uncalled for. The abscess should be opened as soon as fluctuation is detected or there is the faintest indication of pointing. In ordinary cases the drainage-tube is only required for a very few days. Unlike other forms of suppuration in the pelvis, cellulitic abscess, in my experience, tends, when once the matter has been set free, to complete and rapid recovery. I have never seen troublesome sinuses form, and the tendency to lateral displacement of the uterus from subsequent contraction of cicatricial tissue has, I believe, been much exaggerated. This affection offers no bar to subsequent conception, and when pregnancy again takes place its normal course is not interfered with. All this is in strong contrast with what occurs after other forms of pelvic suppuration.

I have had no experience of cellulitic abscesses pointing in the vagina, and therefore have never had occasion to open one there. Frequently I have found, in cases of pelvic inflammation, soft fluctuating swellings depressing the vaginal vault, both laterally and posteriorly; but such swellings have invariably proved to be other than cellulitic, and I have often had cause to be thankful that I had not been tempted to open them from below.

When I said just now that abdominal section was never required in cases of cellulitic abscess I had not forgotten Mr. Lawson Tait's historical paper read before the Royal

[2] See Barbour's Sectional Anatomy of Labour, pp. 16 to 18.

[3] Mr. W. Anderson and Mr. G. H. Makins: The Planes of Subperitoneal and Subpleural Connective Tissue, with their Extensions.—Journal of Anatomy and Physiology, vol. xxv., part i., October, 1890, p. 73.

Medical and Chirurgical Society in 1880. The cases of pelvic abscess, however, that were described in that paper were not cellulitic, but were examples, apparently, of suppurating hæmatoma of the broad ligament and, as such, do not come within the category of which I have been speaking. They belong, rather, to the group with which I come now to deal, and of which I agree with Mr. Lawson Tait in believing abdominal section to be the only proper treatment.

Other Forms of Pelvic Suppuration.

Passing now to other forms of pelvic suppuration, it is desirable in the first instance to obtain some idea of their relative frequency. With that object I have tabulated eighty-three cases in which I have performed abdominal section and found suppurative disease within the pelvis. The number is not large, but it is sufficient to give some indication of the main sources of intra-pelvic suppuration and of their relative frequency. The eighty-three cases may be classified as follows :—

TABLE III.

Purulent salpingitis (including pyo-salpinx)	37
Purulent salpingitis, with suppurating cyst of ovary (eight communicating)	13
Suppurating cyst of ovary	17
Tuberculous disease of tube	3
" " of ovary	3
" " of tube and ovary	1
Disease of vermiform appendix	1
Suppurating retro-peritoneal cyst	1
Suppurating lumbar gland	1
Undetermined	6
Total	83

From this classification it is abundantly clear that purulent salpingitis is much the most frequent source of intra-pelvic suppuration. It was met with in upwards of 60 per cent. of the cases. In 44½ per cent. no other suppurative disease existed, and in the remaining 15½ per cent., although associated with suppurating cyst of the ovary, there was strong evidence of the suppurative change in the ovary being secondary to the purulent inflammation of the tube. Having so recently spoken of the pathological importance of the Fallopian tubes in connexion with pelvic peritonitis, I need not on this occasion further insist upon it. I may, however, point out that the reason why there is no separate mention of cases in which encysted intra-peritoneal collections of pus were found is that such collections are almost invariably a mere complication of purulent salpingitis. We are in the habit of thinking of suppurating Fallopian tubes as closed sacs of pus, the pus being pent up in the tube by occlusion of the abdominal ostium; but it must be remembered that in the earlier stages of purulent salpingitis the fimbriated ends are open and the pus is free to discharge itself into the peritoneal cavity. In a paper recently read before the Obstetrical Society of London I described a case of gonorrhœal salpingitis in which the fimbriated ends of both tubes were open and were discharging their purulent contents into Douglas's pouch, which had become closed in by adhesions. The pouch formed a little reservoir of pus, fed by two supply pipes, and with no outlet. Had the case been allowed to go on, no doubt ulceration into the rectum would have taken place. It was particularly interesting to see one of these intra-peritoneal collections of pus in actual process of formation.

Suppurating Cysts of the Ovary a Form of Pelvic Suppuration frequently unrecognised.

With the exception of purulent salpingitis the most common form of pelvic suppuration is suppurating cyst of the ovary. The frequency with which acute pelvic peritonitis is due to the presence of small suppurating ovarian cysts which, owing to their size, had not previously been known to exist is, I believe, not generally recognised; at any rate, it has been quite in the nature of a revelation to me as case after case has occurred in the course of my own work. I published[4] a series of six such cases, all of which happened to be under my care at one time. In two of them the disease was bilateral and the cysts were of considerable size, yet not even in these had any abdominal swelling been observed previously to the severe attack of pelvic peritonitis for which the patient sought admission to the hospital. When peritonitis occurs in a patient with an ovarian cyst large enough to attract attention as a distinct abdominal swelling it is easy enough to recognise that it is due to inflammation of the cyst, but when such an occurrence takes place in a patient not known to have ovarian disease the source of the inflammation is almost certain to remain unsuspected, and the swelling subsequently observed is almost equally certain to be regarded as purely inflammatory and unconnected with pre-existing disease. These cases are invariably sent into the hospital as cases of acute pelvic cellulitis. I feel sure that even when the abdomen has been opened and the suppuration discovered the true nature of the case has not always been made out. Many instances in which a collection of pus has been opened and the cavity drained, and in which the operator has been unable to satisfy himself as to the precise seat of the suppuration, have, I have but little doubt, been cases of suppurating ovarian cyst. The matting together of adjacent parts is of itself sufficient to introduce an element of confusion and to render recognition difficult; but there is one condition that contributes to increase this difficulty more than any other, and that is the tendency of an ovarian cyst, when it becomes inflamed while still small enough to lie in the pelvis, to contract adhesions to the broad ligament, and in the course of its enlargement to draw the stretched and thickened broad ligament over it, until its anterior surface is completely concealed by it as by a hood. Until an operator becomes familiar with this phenomenon the condition that presents itself to his eye and touch is exceedingly puzzling and misleading. What often happens is that deep-seated fluctuation being detected a trocar is passed through the broad ligament into the suppurating cyst behind it, and the cyst is emptied and drained under the impression that it is a collection of pus either in the broad ligament or behind the parietal peritoneum. Operators who have had frequent occasion to open the abdomen in cases of obscure pelvic suppuration will, I feel sure, recognise the truth of this description. The proper treatment of such cases is, not to tap the cyst, but, having obtained access to it by the careful and patient separation of adhesions, to enucleate it if possible entire, until there remain only the normal attachments, which can then be treated as a pedicle, and the whole cyst removed.

With regard to the cause of the suppuration in these cysts the evidence is strongly in favour of the view that in the great majority of cases the suppurative change in the ovary is secondary to purulent salpingitis. Of the thirty cases in which suppurating ovarian cysts were discovered it will be seen from the next table that active purulent salpingitis was found in thirteen and chronic salpingitis in twelve.

TABLE IV.

Suppurating Ovarian Cyst (intra-pelvic).

Directly communicating with suppurating Fallopian tube	8
Adherent to suppurating Fallopian tube	5
Adherent to inflamed Fallopian tube	12
Adherent to ulcerated vermiform appendix	1
Source of infection undetermined	4
Total	30

In the latter the conditions of the parts around showed that the tubal inflammation, though now chronic and comparatively quiescent, had originally been acute and severe. The fire had here, as it were, died out, though in the neighbouring structures, to which the flames had extended, it was still raging. Thus 83 per cent. of the cases of suppurating ovarian cyst were associated with salpingitis. If it be asked, Why may not the tubal disease be secondary and the ovarian primary? I reply that if that had been the case one would have expected the mucous lining of the tube to be the last part affected and the least; in other words, one would have expected evidence that the inflammation of the tube had passed from the peritoneal coat inwards rather than from the mucous coat outwards. In eight instances the suppurating tube and the suppurating ovarian cyst were, at the time of operation, in direct communication owing to ulceration of the cyst wall and perforation into the adherent tube. Whether the cystic degeneration in the ovary ever itself begins as an indirect result of inflammatory changes involving the outer coat of the ovary I cannot say; but certainly in the majority of cases it is much more likely that there already existed a small cyst, the contents of which became infected from the adjacent tube and underwent suppuration, and that under these circumstances the cyst grew so rapidly as to be easily mistaken for a large abscess in process of formation. Of the five remaining cases of suppurating ovarian cyst, in one the cyst had evidently become infected from a diseased vermiform appendix; whilst in the remaining four the source of the suppuration was not

[4] THE LANCET, July 2nd and 9th, 1892.

discovered. It is of course possible that in these the cysts became infected from their propinquity to the rectum.

To the remaining cases of intra-pelvic suppuration enumerated in Table III. I propose only to allude very briefly. The subject of tuberculous disease of the uterine appendages, of which there are seven cases on the list, is one of extreme interest, but is much too large to be adequately dealt with on the present occasion. I would merely say, in passing, that when the disease is limited to these parts, or when the only other manifestation of the disease is miliary tubercle of the peritoneum, removal of the diseased appendages is not only a justifiable operation, but is frequently attended with the most satisfactory results. The female pelvis is one of the situations where we are happily able, when the condition has been discovered in time, to rid our patients of the disease before it has become a focus of general tuberculous infection.

The case in which an intra-pelvic suppuration was found to be due to a diseased appendix vermiformis is, of course, one that does not properly come within my province as a gynæcologist; it happened, however, that the acute attack of peritonitis for which the patient was admitted to hospital occurred a few days after parturition, and was naturally thought to be connected with that process. As it is only under exceptional circumstances that such cases come under my care, it is obvious that my individual experience affords no guide to a correct estimate of their relative frequency. The six cases in which the seat of the suppuration was not definitely made out occurred in the earlier part of my work, when, having not yet attained the boldness that comes of experience, I was content to empty and drain any deep-seated collection of pus in the pelvis without attempting to separate and remove the suppurating organ.

Fistulæ as a Complication of Pelvic Suppuration.

I propose to devote the remainder of the time at my disposal to a consideration of those cases in which collections of pus within the pelvis have burst into the rectum, the genital canal, or the bladder, and in which the opening being insufficient and the evacuation of the pus consequently incomplete, a sinus remains through which there is a constant or intermittent purulent discharge. From amongst a number of such cases that have come under my observation I have selected for mention a single example of each of the main varieties of this form of fistula, beginning with the most common one—namely, that which occurs as the result of the bursting of a collection of pus into the rectum.

CASE 1.—A woman aged thirty-five who had been in good health all her life, and was entirely unaware that she had a tumour of any kind, was attended in the maternity department of St. Thomas's Hospital in her eighth confinement. On the sixth day the temperature rose to 100·2° F. On the seventeenth day the patient complained of a dull aching pain in the lower part of the back and the outer part of the left thigh. On the nineteenth day there was noticed some swelling in the abdomen, and on the following day—i.e., the twentieth—the patient was admitted into the hospital. The abdomen was irregularly distended. The uterus reached to within three inches of the umbilicus and was pushed forwards by a swelling behind it, which felt like a tense cyst. On vaginal examination a swelling, continuous with that felt in the abdomen, was found to occupy the hollow of the sacrum, distending Douglas's pouch. It was of unequal consistence, and in one part gave a sense of fluctuation. The temperature ranged from 99° in the morning to 101° in the evening. The urine was healthy. It was thought at first that the swelling might be a hæmatocele, but when the patient had been nearly three weeks under observation a large quantity of very fetid pus was passed by the rectum. The temperature at once fell to normal, and next day there was a marked diminution in the size of the swelling. Pus continued to be passed intermittently for a fortnight, when abdominal section was performed. The swelling proved to be a suppurating dermoid cyst of the right ovary. The cyst was everywhere adherent and the process of separating and removing it was one of extreme difficulty, occupying two hours and a half. The cyst contained a compact mass of hair four inches by three inches, some pieces of bone, and, in a separate loculus, twenty-eight fluid ounces of thick, yellow fluid which solidified on cooling. A direct communication existed between the cyst and the right Fallopian tube, which was nine inches in length and greatly thickened, and was in a state of acute suppurative inflammation. The cyst had also opened by ulceration into the rectum. Convalescence was somewhat protracted, but no pus was again seen in the evacuations, and none of the contents of the bowel ever escaped through the wound. The patient left the hospital well in ten weeks. It is now upwards of two years since the operation, and the patient, whom I saw a fortnight ago, remains perfectly well.

CASE 2.—In this case a sinus existed in the vault of the vagina for eight months and was found at the operation to communicate with one of a series of small suppurating cysts of the right ovary. It is of special interest: (1) as being a typical example of the cases that have continually been described by observers who do not operate as instances of cellulitic abscess bursting into the vagina; and (2) as affording an unanswerable argument in favour of dealing with such cases by abdominal section rather than by enlarging the sinus from below. The case has already been published in detail,[5] and I shall, therefore, be content with giving it here in abstract. A young married woman aged twenty-two was delivered of her first and only child at the age of nineteen. For twelve months after the labour she suffered from constant pain in the right iliac region. She then remained well for some few months, when the pain returned, and one day, eight months before admission to hospital, a sudden discharge of thick, yellow, fetid matter took place from the vagina. The discharge had continued with short intervals ever since. Douglas's pouch was occupied by a hard rounded mass, extending further to the right side than to the left. The vaginal roof on the right side was slightly depressed. The cervix was fixed. At the upper part of the posterior vaginal wall there was a small opening the size of a pea, with indurated margins. The diagnosis was that of vaginal fistula communicating with the inflamed and suppurating right uterine appendages. Abdominal section was performed. A soft oblong mass, consisting of the right ovary and Fallopian tube, was removed from Douglas's pouch, where its dense adhesions were separated with difficulty. On examination the diseased ovary was found to consist on section of a number of small inflamed cysts, many of them being full of pus. An opening large enough to admit a goose-quill and surrounded by granulation tissue was found on the surface of the ovary, communicating directly with one of the abscess-cavities in its substance. The right tube was attached to the ovary and was elongated. Five weeks after the operation the patient left the hospital well. There had been no further purulent discharge from the vagina. Ten months later no swelling could be detected on vaginal examination on either side of the pelvis. Menstruation was regular, and the patient was well and strong. Had the treatment here consisted of enlarging the sinus in the posterior wall of the vagina, only one cyst would have been laid open, and the patient would have been left with several others to cause trouble later on.

CASE 3.—The following case, like the first that I related, proved to be a suppurating dermoid cyst of the ovary, situated deeply in the pelvis; but instead of ulcerating through into the rectum it opened into the cervix uteri, resulting in a fistula in that situation. I have published the case in full,[6] and shall here merely give an abstract of it. A married woman aged thirty-six was admitted into hospital nineteen weeks after a difficult labour. A fortnight after the labour a purulent discharge from the vagina took place and continued for thirteen weeks, when it suddenly became more profuse and very offensive. Not long after this a quantity of horribly offensive pultaceous material passed, together with a quantity of hair three or four inches in length. The patient subsequently endeavoured to occupy herself in the house, but found that she was becoming thinner and weaker, and that she was never safe from a sudden outburst of ill-smelling discharge. An abdominal swelling had been noticed for the first time about six weeks after the confinement. On admission to hospital the patient, who was sent in as a case of pelvic cellulitis, was pale, wasted, and very ill. She had a rounded tumour in the right iliac region, reaching to the level of the umbilicus. On the inner and posterior wall of the cervix there could be felt a lacerated depression, and behind it, in Douglas's pouch, there was a hard rounded mass. On opening the abdomen the swelling proved, of course, to be a suppurating dermoid cyst of the ovary. The tumour was carefully and with much difficulty detached all round, a quantity of highly offensive pus flowing from the vagina during the manipulation. Before separating the adhesions in the neighbourhood of the perforation the pedicle was

[5] Transactions of the Obstetrical Society, vol. xxxiv., 1892, p. 387.
[6] St. Thomas's Hospital Reports, vol. xvii.

divided in order that the tumour might, after separation, be lifted quickly out and the inevitable soiling of the pelvis from the escape of the cyst contents reduced to a minimum. As the tumour was removed a gush of highly offensive gas escaped with a distinct whizz. The patient was able to sit up in bed at the end of three weeks, and six weeks after operation she left the hospital well. This case, like the first, is an instance of suppurative inflammation of an unsuspected ovarian cyst, closely following a difficult labour. It is easy to understand how readily the true nature of such a case may be overlooked. The probability is that, in this latter case, some laceration of the posterior wall of the cervix took place during delivery, opening up a channel by which septic infection could easily reach the tumour.

CASE 4.—The next and last case that I shall relate is, to my mind, the most interesting of all. The patient, a woman aged thirty-two, had been married nine years, but had never been pregnant. Six months before her admission to hospital she had what was supposed to be an attack of influenza. She kept her bed for a fortnight and then went into the country. Whilst there she noticed some thick yellow matter in the urine, which had continued to appear ever since—that is, for a period of five months—the daily quantity being estimated by the medical attendant to average about half a fluid ounce. She had suffered pain from time to time in the right iliac region, but this had never been very severe. On examination under anæsthesia the uterus was found to be of normal length, the canal being directed to the left. On the right side of the pelvis a large, hard, uneven, roughly globular mass was felt, depressing the vaginal roof and extending upwards to the level of the anterior superior iliac spine. A sound introduced into the bladder was prevented by the swelling from passing beyond a very short distance in the middle line, but passed easily to the right and to the left of it posteriorly. It was evident that there was chronic suppuration of the uterine appendages and that there was a sinus communicating with the bladder. I had not yet had occasion to operate upon a case of this kind, and although I saw no other satisfactory way of dealing with it I undertook the operation with considerable misgiving. However, on Dec. 8th of last year I opened the abdomen. The thickened right broad ligament had been drawn over the anterior surface of the diseased parts and was adherent to the omentum and pelvic wall. These adhesions having been separated, access was obtained to the mass beneath, and, with the fingers of an assistant in the rectum to serve as a guide, separation was slowly and carefully effected. The mass when removed proved to consist of the inflamed right Fallopian tube and a suppurating cystic ovary three inches in diameter. The ovary was removed without rupture. Its surface was convoluted like that of a tomato. On its under surface there was a small opening from which blood-stained purulent fluid oozed on pressure and which probably represented the aperture of communication with the bladder. On section it was shown to contain two separate cysts, each of them being filled with purulent fluid of a brick-red colour and without ill-odour. The bladder was deep down, quite out of sight and out of reach, so that any attempt to close the opening in its wall was entirely out of the question. No urine escaped either during the operation or subsequently. The urine drawn off up to midnight contained pus and blood. The bladder was at first emptied by catheter every two hours to prevent distension. Next day the interval was prolonged to three hours, and on the fourth day to four hours. The patient was able to sit up on the sixteenth day and left the hospital looking stout and well at the end of two months. Notwithstanding that the general condition was excellent, there continued to be a little suppuration from the lower angle of the wound for six months, when the sinus finally closed. The patient has presented herself since from time to time, and when I last saw her, a month ago, she was in perfect health.

I have narrated these cases with two objects especially in view. The first was to show that when pelvic suppuration is complicated by internal fistulæ the suppuration is not cellulitic, however much it may simulate it, but is due to intra-pelvic disease that can only be properly dealt with by abdominal section. The second object I had in my mind was to show the feasibility, even in the most unpromising cases, of complete removal of the disease, and to urge the superiority of that method of treatment over the mere emptying and draining of the suppurating cavity and the stitching of the edges of the sac to the abdominal incision. I am painfully conscious that in offering the foregoing remarks to my professional brethren in Birmingham and the midlands I am addressing many who have had a far larger experience than I in the treatment of the diseases to which they refer, and before whom it would be much more fitting that I should appear in the capacity of learner than of teacher. Nevertheless I trust that they will appreciate my efforts to prove to them that the example they have set, in endeavouring, in spite of much opposition, to advance the department of medicine with which I am more especially identified, has not been altogether lost even upon the benighted Londoner.

Introductory Address,

Delivered at Queen's College, Belfast, to the Class of Anatomy,

BY JOHNSON SYMINGTON, M.D., F.R.C.S.EDIN.,
PROFESSOR OF ANATOMY.

MR. PRESIDENT, COLLEAGUES, AND STUDENTS,—To-day I appear before you for the first time in the capacity of Professor of Anatomy in this college, and in accordance with the usual custom it is now my duty to deliver an introductory address. The reasons for such a custom are many and obvious. It affords a suitable opportunity of reviewing the past history of the chair, and acknowledging the labours of our predecessors, and of considering the present position and future prospects of the science for the teaching and advancement of which this chair exists. I desire also to embrace this opportunity of explaining the general lines on which I propose to conduct the department now committed to my care. This college was founded in 1845, and from that time until the present session the subjects of anatomy and physiology have been conjoined under one professorship. The first occupant of the chair was Dr. Hugh Carlisle. He was a nephew and pupil of the celebrated Dr. Macartney, who is considered by Professor Macalister to be the greatest anatomist that Ireland ever produced. Before his appointment in this college Dr. Carlisle had had a very extensive experience as a teacher, having been a demonstrator of anatomy in Trinity College, Dublin, for about nineteen years, and for a short time after leaving Trinity College, he was professor of anatomy and physiology in the Park-street School of Medicine, Dublin. He was a man of splendid physique, and when a student at Trinity College he enjoyed the reputation of being the best boxer in the college. I trust that even in those days such an accomplishment was not an essential qualification for a demonstrator of anatomy, and Dr. Carlisle showed that success in athletics was not incompatible with high scientific attainments. While a demonstrator in Dublin he was a very diligent dissector of the animals which died in the Zoological Gardens, and he gained a very extensive and profound knowledge of comparative anatomy. He brought with him to Belfast a valuable collection of specimens illustrative of this subject, many of which are still preserved in our anatomical museum. His most important contribution to anatomy was a paper on the Sacrum, in which he showed that it had costal elements and that there were only two real sacral vertebræ in the fœtus. He was a charming lecturer, and the esteem in which he was held by his colleagues and students is evident from the fact that his portrait was presented by them to the college. It is hung in our examination hall. The only member of the present medical faculty who studied under Dr. Carlisle is our distinguished professor of medicine, Dr. James Cuming. I know that he entertains a very high opinion of his old friend and teacher. In the year 1860 Dr. Carlisle retired, and the college authorities had to appoint a successor. In 1858 the Universities (Scotland) Act was passed, and amongst the many changes that it effected there was one that was destined to have a very important influence upon this college. At the time of the passing of this Act there were two teachers of anatomy in Aberdeen, one in connexion with Marischal College and the other in King's College. These two colleges were united into one university and the lectureship on anatomy in King's College was abolished. The holder of that position was Professor Peter Redfern, who, even at that time, had gained a European reputation by his

important researches on Abnormal Nutrition in Articular Cartilages. Sir Arthur Mitchell, K.C.B., Commissioner in Lunacy for Scotland, and one of the oldest and most distinguished of Professor Redfern's pupils, assures me that he cannot adequately express his great indebtedness to him, that as a teacher Professor Redfern inspired his pupils with a genuine enthusiasm and devotion to science, while as a personal friend and adviser he gained their admiration and love. He was one of the earliest teachers of practical histology in Great Britain, and while in Aberdeen, not only did he conduct those researches on cell division in cartilage which will cause his name to be handed down to posterity with those of Goodsir and Virchow as one of the founders of cellular pathology, but he also performed an extensive series of experiments on the physiology of the nervous system which, unfortunately, were never published. Professor Redfern came to Belfast in 1860, and his history since then is inseparably associated with that of its medical school. There can be no need for me to attempt to show here how Professor Redfern during the last thirty-three years has devoted his great powers with untiring energy to the advancement of the interests of this college. I must leave an estimate of his work to those better qualified than myself to do full justice to the subject, but would join in the earnest wish of all that he may long be spared to enjoy his well-earned rest. In the year 1884, in an article treating of Some Characteristics of Anatomical Teaching in Great Britain, Professor Alexander Macalister wrote as follows: "In the university schools of other parts of Britain the teaching of anatomy has been for many years in the hands of men specially set apart for the work, although in some of these (as that of Queen's College, Belfast, the largest medical school in Ireland) it is much to be regretted that the whole of the burden of teaching, both of anatomy and of physiology, should be cast upon one single professor." Happily, this opprobrium of the Belfast Medical School has at last been removed. It is nearly fifty years since the Queen's Colleges were founded, and the interval has been marked by such important advances in both anatomy and physiology that their union under one professor was no longer possible if Belfast was to hold its present high position as a school of medicine. Thanks to the munificent liberality of Mr. R. G. Dunville, D.L., in endowing a separate chair of physiology, the establishment of two independent professorships is now an accomplished fact. The good work thus begun is by no means completed. It is necessary that these departments should be properly housed and furnished with the needed apparatus. Medical teaching is every year becoming more and more practical, and to keep pace with this growing demand teachers require more space and better appliances. This fact has been recognised by almost every school of any importance in the United Kingdom. Witness the palatial edifices that have been erected in Edinburgh, Glasgow, Cambridge, Manchester, and Trinity College, Dublin. Even conservative Oxford, with its small medical school, has recently provided a new department for human anatomy at a cost of £7000. The present department, with the addition of a large and well-lighted bone-room, would provide reasonable accommodation for my own needs; but they are quite inadequate and unsuitable for the efficient teaching of both anatomy and physiology. I cannot believe that the Government and the citizens of Belfast will allow such a state of matters to remain long unremedied. The erection of additional buildings and their proper equipment are necessary results of the foundation of a new chair, otherwise the college can derive comparatively little benefit from the generous bequest of Mr. Dunville.

Human anatomy is the oldest of the biological sciences. The main facts connected with the general form and relations of the various parts of the human body, as ascertained by dissection, have been well known for several centuries, and many are disposed to regard the anatomy of man as an almost barren field of research. Our text-books describe with the utmost minuteness each particular structure, and the young student may well be excused if he imagines, when reading the careful and elaborate description of some bone or muscle, that modern anatomists have merely to follow as faithfully as possible the teachings of their predecessors. I trust, however, that none of you will pursue your anatomical studies in such a spirit, for not only is it fatal to scientific advancement, but it is also inconsistent with the recent history of anatomy. Every year fresh advances are made in our science, old errors are exposed, and new questions are continually arising for solution. Some idea of the activity at present displayed may be obtained from an inspection of some of the excellent journals which are published at stated periods lists of the current contributions to our science. Thus from the volume for 1891 of the anatomical portion of Hermann and Schwalbe's well-known *Jahresbericht* it will be found that the books and papers published during that year amounted to nearly 2000. Again, in the *Anatomischer Anzeiger*, which is published fortnightly, there is usually a list of upwards of 100 new books and papers. Even though the most liberal deductions are made for those text-books and papers that are mere compilations of already known facts there still remains a large mass of valuable original work, which even the most zealous student can never hope to read, much less to master. This activity in research embraces every department of anatomy, and will be found to afford abundant evidence of patient and laborious observation, great ingenuity in the invention and application of new methods of investigation, and a keen appreciation of the problems that require solution. Since the publication of the "Origin of Species" in 1859 the views of anatomists regarding the relation of the anatomy of man to that of the other members of the animal kingdom have undergone an entire revolution. As Sir Henry Flower has well expressed it: "Anatomy has hitherto been a pyramid standing upon its apex—that is, man. We have to turn it round and let man stand where he ought, at the apex, resting upon the broad basis of the whole organised world."

It is impossible in the limited time at my disposal to-day even to indicate the main advances that have occurred in recent years. I can only briefly refer to a few of these, and I may perhaps be pardoned if I first consider the progress that has been made in our knowledge of the topographical anatomy of the human body, since this is a department with which my own researches have made me specially familiar. The statements contained in the common text-books on anatomy regarding the form and relations of the various parts of the body are based mainly upon the ordinary methods of dissection. This method is one that must be diligently pursued by every student who desires to obtain a knowledge of the anatomy of the human body, and I am glad to find that your opportunities for practical work are second to none in the United Kingdom. A too exclusive reliance upon this method, however, is liable to lead, and often has led, anatomists into numerous errors. This is more especially the case with the organs contained within the various cavities of the body, since the ordinary methods of dissection naturally tend to alter the normal form and disturb the natural relations of these structures. To obviate these sources of fallacy various plans have been introduced, the one most commonly adopted being to freeze the part and to make a series of sections through it while it is still frozen. The first important work based upon this method of research was that of Professor Pirogoff of St. Petersburg, entitled "Anatome topographica sectionibus per Corpus Humanum Congelatum." It was published in 1859. The climatic conditions of St. Petersburg are, of course, very favourable to this method, which in more southern regions is attended with considerable trouble and expense. The most important contributions to sectional anatomy are those of the late Professor Braune, who pub'ished a number of large and beautifully illustrated works on the subject. Within the last few years my old friend and former colleague, Professor D. J. Cunningham of Dublin, has employed this method not only in the investigation of various points in human anatomy, but he has also extended it to the comparative anatomy of the anthropoid apes. Another method which has yielded very important results in the hands of Professor His is that of hardening the organs *in situ* by the injection of a solution of chromic acid and then taking a series of cuts of the hardened viscera when exposed by careful dissection. A somewhat similar method was employed by Professor D. J. Cunningham in illustration of cranio-cerebral topography. The beautiful series of models which you can see in our museum testify to the value of this method. A few examples of the results obtained by these improved means of investigation may be mentioned. The description of the shape of the liver contained in all our text-books until a few years ago, and still surviving in a few, was not only a disgrace to scientific treatises which were presumed to be models of accurate description, but was calculated to seriously mislead students in their clinical studies. The account given of this organ had only the faintest resemblance to its natural configuration when in the body, and was based upon a particular shape it was made to

acquire after its removal from the abdomen; it was first flattened out like a pancake, and then the anatomist proceeded to describe its form. As this large organ usually becomes very soft and flabby soon after death it might almost as well have been rolled into a ball and then described as having that characteristic and familiar form. If, however, the liver be carefully examined when hardened *in situ* our conception of its form and relations is entirely altered; we learn how beautifully it is moulded to neighbouring organs, and with what facility it can adapt itself to the constantly occurring physiological variations in the form and position of adjacent structures. Anatomists in all ages have been profoundly impressed by the countless number of wonderful adaptations of means to ends which their dissections revealed, and I know of no more striking example of this than the arrangements by which the human liver maintains, with singular tenacity, against gravity and numerous other forces its normal shape and position.

Every student is familiar with the old drawings of the stomach (still retained in many text-books), in which the œsophageal opening is represented as being the highest part of the organ and its fundus is shown pointing towards the left side, whereas the fundus bulges upwards into the left vault of the diaphragm and even in the empty condition is placed at a higher level than the œsophageal opening. The spleen is another abdominal organ the form and topographical relations of which were very imperfectly described until recent years. Notwithstanding the numerous errors that have been corrected you must not suppose that the topographical anatomy of the abdominal viscera is now thoroughly understood. This study is beset with special difficulties on account of the mobility of the abdominal wall and many of its contents, as well as from the marked physiological variations in the amount of contraction or distension of its hollow viscera and of the vascularity of its solid organs. A careful and an extensive series of observations is still required to determine the average or typical form and position of its various viscera and the effects produced upon neighbouring structures by the contraction and distension of the different hollow organs. The great advances that have taken place in the diagnosis and treatment of the diseases of the abdominal organs and the frequency with which surgeons now undertake operations in this region render it very important that the clinician should be provided with accurate information regarding its topographical anatomy.

The sectional method has been employed very successfully in the study of the relations of the pelvic viscera. On the Continent the names of Braune, His, Waldeyer, Rüdinger, and Hasse are familiar to all workers in this department of anatomy, while a school of gynæcologists has arisen in Edinburgh, represented by Berry Hart, Freeland Barbour, Ballantyne, and Webster, that has done much to place obstetrics and gynæcology upon a sound anatomical basis. While every department of anatomy can claim a number of earnest investigators, it is especially the study of the nervous system that has attracted the attention of anatomists. Its profound complexity and the enormous difficulties connected with its investigation have only served as a stimulus to greater exertions, and the progress that has been made in recent years is a happy augury of its greater triumphs in the near future. Less than fifty years ago the cerebral convolutions and fissures were generally regarded as having no definite or constant arrangement. Their careful study, however, not merely in the adult condition, but also during the various stages of their development in the individual and their gradual evolution from the lower to the higher apes, has enabled the anatomist, not merely to recognise regularity and order where there was formerly supposed to be neither, but also to distinguish their relative importance. The work commenced by the anatomist was rapidly followed by that of the physiologist and pathologist, so that the exact seat of any particular injury or disease can now be frequently localised with the greatest accuracy and treated with the most brilliant results. The recent progress in our knowledge of the nervous system has by no means been confined to naked-eye anatomy. About fifty years ago Stilling laid the foundation of our present knowledge of the minute structure and arrangement of the elements of the nervous system. He froze a piece of spinal cord, and after making a series of thin sections through it he endeavoured to reconstruct the organ by a study of the series of sections. The magnificent works which he published on the subject must ever remain a splendid monument to his industry and devotion to science. The various improvements in the methods of hardening, staining, and cutting sections have enabled us to trace the course of numerous and complicated tracts of nerve fibres. Valuable aid in this study has been gained by the discovery that the medullated nerve fibres do not all acquire their white sheath at the same time, certain tracts being regularly medullated sooner than others. The results obtained by the investigation of their development has been confirmed by their degeneration, which occurs when the cells with which the fibres are connected have been destroyed. During the revival of learning in the sixteenth century the Italian school of anatomy gained a very high reputation and produced a number of anatomists who made important and valuable discoveries. Among them were Berenger, Columbus, Eustachius, Fallopius, Arantius, and Fabricius. Even Vesalius, the father of modern anatomy, although not an Italian by birth, was a professor of anatomy at Padua. Of late years Italy has again taken a leading part in anatomical research, and Professor Golgi of the university of Pavia has discovered a method of demonstrating the ramifications of the processes of nerve cells which has revolutionised our views on a question of the deepest interest, not simply to the anatomist, physiologist, and pathologist, but to all who desire to know something of the subtle connexions of mind and matter.

As your teacher of anatomy it will be my duty to remember that the great majority of you intend to devote yourselves to the practice of the medical profession, and it must be my constant aim so to direct your anatomical studies that you may be qualified to pursue your subsequent work in surgery, medicine, and obstetrics upon a sound and intelligent basis. I would impress upon you the fact that the constant progress in every department of our profession is rendering an accurate knowledge of anatomy more and more essential to the scientific study of your profession. Not many years ago an acquaintance with the structure and relations of many parts of the body appeared to be of merely academic interest, whereas now they are essential to those who desire to be abreast of the times in the diagnoses and treatment of their diseases. The accurate determination of the seat of various nervous lesions can in many cases be settled only by one possessing a sound knowledge of the anatomy of some of the most complicated portions of the brain. If you are familiar with the development of the temporal bone and its relations at various periods of life you will be in a position to appreciate the great dangers attending inflammation of the middle ear and the *rationale* of its treatment. A few years ago no English text-book on anatomy contained an intelligible description of the mastoid antrum; now elaborate monographs are written on its anatomy and pathology, and every student of surgery is expected to be familiar with the operation for opening into it in the living body. Human anatomy, however, is not to be studied as a mere collection of isolated facts which it is necessary to master in order to pass certain examinations and fit you for the ordinary routine of your profession. Embryology and comparative anatomy have invested the details of human anatomy with a new interest, and enable us to give an intelligent explanation of many of the variations which we meet with in our dissections and to explain the presence of various structures which appear to be of little or no value to the organism. When as first year students you commence the dissection of the armpit you will find a small tendinous slip passing from a muscle called the latissimus dorsi to another known as the long head of the triceps. It is a small structure generally overlooked by the student and not mentioned in many of our text-books, yet a study of its variations and comparative anatomy invests it with peculiar interest. In man it occasionally, but not frequently, contains some muscular fibres, while in all the anthropoid apes it forms a well-developed muscle extending down towards the elbow and known as the dorso-epitrochlearis. In all these animals it obviously assists in raising the trunk during the act of climbing. At what remote period in prehistoric times man descended from his arboreal residence I will not venture to speculate upon, but did we but possess a complete history of this small tendon it would throw a flood of light upon that fascinating problem. Even to the so-called practical man the utility of a knowledge of morphology can easily be demonstrated. He needs only to read Mr. Bland Sutton's little work on "Evolution in Pathology" to learn how much this science teaches us regarding the situation and nature of many morbid growths and the causes of various malformations.

And now, gentlemen, I should like to say a few words

before concluding my address regarding the necessity of some limitation in the amount of anatomical details which you are expected to remember in your professional examinations. My remarks on this head must be very brief; but fortunately you will find the question fully and ably discussed in recent numbers of the medical journals by two experienced teachers, Professors Macalister and Haycraft. No one at all familiar with medical education can doubt the existence of what my friend Professor Macalister very truly calls "the grievous burden of the student." No one will, I presume, question the necessity of a careful dissection of the whole body by those who desire to qualify themselves for the diagnoses and treatment of the manifold diseases to which every part of the body is liable, and in many cases the knowledge thus obtained must be corrected and augmented by a study of frozen sections. To test the care and thoroughness with which this work has been done the examinations should be as practical as possible. Every examiner of experience knows how often one meets with students who can write long and elaborate anatomical papers containing minute and accurate descriptions of the form and relations of structures which in the dissecting-room they cannot dissect out or recognise. On the other hand, many a student whose memory for names is less retentive, and whose capacity for cramming is slight, shows at once, when confronted with dissections, a thoroughly practical familiarity with the subject. Too often examination papers set a premium on mere book knowledge, and the written portion of the examination is treated as of more importance than the oral. I believe that the mental labours of the student of anatomy would be lightened, his innate tendency to trust to mere book knowledge checked, and his practical studies encouraged were the written part of his examination made to occupy a subsidiary position or even abolished, and the oral portion made even more practical than at present. There are certain subjects in the medical curriculum in which the student must trust very largely to his notes and text-books, but happily this is not the case with anatomy. Many anatomical details which are given in our text-books are a useless burden on the memory of the student, having no special morphological significance or any bearing on their professional work. On the other hand, I believe that some in their zeal for reform appear to overlook the large mass of anatomical facts which can easily be shown to have a direct bearing upon the work of the surgeon and physician. It is because I believe that the number of these facts is constantly increasing with our advancing knowledge of disease that I recognise the necessity of some modification in our teaching and examinations.

THE HEART AS A GUIDE TO TREATMENT IN INFANTILE CONVULSIONS.

BY ALEXANDER MORISON, M.D., F.R.C.P. EDIN., M.R.C.P. LOND.

BY infantile convulsions I mean that group of phenomena, commencing with clonic muscular contractions and ending with coma, which may not all be met with in every case, but which are sufficiently often associated to form one clinical picture. If the fit occur during the day medical assistance is usually sought during the preliminary and most frequently convulsive stage of the disorder; but should it occur during the night this stage may have passed before the condition of the child has attracted attention, and the physician may then find the patient comatose. Objectionable as it may be in principle to describe a disease by a sign or symptom, there is a tacit concession of the convenience in some cases of emphasising a dominant feature. While, moreover, the removal of a cause is the scientific procedure in rational therapeutics, that cause, and therefore the essential nature of the disease, may be obscure; while an urgent symptom may point the quickest road to death and indicate at the same time the direction the immediate efforts of the physician should take in his endeavour to save life. It is because the case I am about to relate came within this category that I have used a symptomatic rather than pathological nomenclature. So grave were its features, so apparently consequent the action of the chief therapeutic agent, and so gratifying the general issue that I made very complete notes at the time and reproduce them *verbatim*.

L. B——, a female child nineteen days old, was in good health on July 9th, 1881. At 10 A.M. on that day she had half a breakfastcupful of thin oatmeal gruel (grits); at 3 P.M. "the bottle," with about one ounce of milk and water (1 to 3); and at 8.30 P.M. half an ounce of oatmeal gruel. In the interval between these times, being more restless than usual, she was suckled more frequently than ordinarily, and her mother said that "she took the breast very freely indeed." Since she was three days old she has had more or less gruel, and also cow's milk and water, and last, but not least, the mother's milk. The infant may, therefore, be said to have been on tolerably full diet, and, considering the normal absence of the salivary secretion, not under the best conditions for the digestion of farinaceous food. The child was stated not to have taken any narcotic drug—an important point, as the context will show. On July 10th, about 12.30 A.M., the child was noticed to be breathing heavily, but was not further observed till 4 A.M., when she was applied to the breast, but would not suckle, and was again seen to be "breathing hard." A teaspoonful of castor oil was given her, she was placed in a hot bath, and I was sent for. She was seen by me at about 5 A.M., when her condition was as follows. Respiration was about 12 per minute, very slow and infrequent, and prolonged into a stertorous snore, such as one observes shortly before death; the heart's beat was about 10, 15, and 20 per minute; the body was cold; the patient was perfectly unconscious, and the pupils were contracted to the size of a small pin's head; both pupils were equally contracted. The hot bath, with mustard poultices to the chest, abdomen, and back, served to rouse the circulation and respiration temporarily, but the former lethargic coma again supervened. There was no convulsion of the limbs, neck, or trunk, which were perfectly limp; but there was occasionally a convulsive quiver of the lips, with a rapid convulsive protrusion and retraction of the tongue at the same time. I used ether inhalation with artificial respiration without more than very transitory benefit. At times the heart was inaudible, and the respiration was so infrequent and the body so limp that I was uncertain whether the child were not really dead. I then determined as a last resource to use tincture of belladonna in such doses as to produce, if possible, an immediate effect on an apparently moribund subject. I accordingly injected a small teaspoonful—as nearly as I could judge from forty to sixty minims—with a little water per anum (not having with me a hypodermic syringe), and, having waited for two or three minutes without observing any effect on the contracted pupils or on the heart's action and respiration, gave per os, and pushed well down the throat so as to be swallowed, about half the same teaspoonful of the same tincture of belladonna, with ten drops of sulphuric ether. In a few moments, and quite suddenly, the pupils dilated to about three millimetres in diameter, and forthwith the heart bounded away like a steed which had suddenly wrenched itself loose from its fastenings. This acceleration continued for a longer time and was much more marked than that which followed any previous excitant; but it, too, at length began to yield to the comatose lethargy which appeared to be invincible. I therefore again gave a similar quantity of tincture of belladonna and ether per os, which was followed by a further dilatation of the pupils and increased cardiac acceleration. In all, the child had per anum and per os ninety minims of tincture of belladonna (B.P.) and from twenty to thirty minims of ether in addition to that inhaled. I should have mentioned that I emptied the bowels by enema, passing my little finger through the sphincter ani to evacuate all fluid &c. before injecting the belladonna. At 10 A.M. the pulse was 156, the temperature was 100·2° F., and the respiration was 72. There were frequent convulsive twitching and action of the tongue as above described, both pupils were dilated, the patient was unconscious, and reflex action was easily provoked. Ten grains of bromide of potassium were given. At 12.30 P.M. the pulse (heart) was 202, the temperature was 104°, and the respiration was 96. I applied a handkerchief which had been dipped in iced water to the head, and gave a little iced water per os. Sudden failure of the heart's action followed—that is, it rapidly slowed till it became inaudible—with cessation of respiration and fall of temperature. Artificial respiration was tried by squeezing the abdomen and bending the body forwards; then pressure was removed from the abdomen and the body bent backwards. Returning respiration came in infrequent gasps, sometimes accompanied by a whooping cry. About

twelve minims of brandy in water were injected per anum, with immediate acceleration of the heart and respiration, and rise of temperature; she was quite unconscious. At 5 P.M. the temperature was 102° and the pulse 186, and the patient was more sensitive. At 9.25 P.M. the temperature was 102·6°, the pulse was 192 and sensibility was greater, and the pupils were still dilated, but less so; the back was vesicated by the hot-water bottle; she had not urinated since 11 A.M.; linimentum calcis was applied for the burn. On July 11th the patient urinated at midnight, and freely again at 10 A.M.; the bowels acted at 8 A.M. and 9 A.M., the discharge being stringy and mucoid; the pulse was 156, the temperature 101·4°, and the respiration from 48 to 60. The vesication was better; the patient was quite sensitive, cried lustily, and was suckled three times; the pupils were still dilated, but rather less so, and feebly responded to light; the globes of the eyes moved freely, which they had not done on the previous day; the right especially was turned up and everted; the abdomen was still a little tympanitic, but less so than the day before. Sixty minims of castor oil were given; the child was directed to be suckled by the mother entirely and not more frequently than every two hours. At 6·25 P.M. the temperature was 99·6° and the pulse 156; the bowels had acted three times; she was crying, apparently from hunger, judging from the action of the lips and the tongue; the pupils were still dilated and did not respond to candle-light. On July 12th, at 12 45 P.M., the pulse was 126, the respiration 54, and the temperature 98·8°; the bowels had acted, and she had urinated freely; the pupils responded naturally to light, but were slightly dilated. Treatment was now directed to two scalds on the back from a six ounce hot-water bottle, and mustard poulticing; otherwise the child was well. I may add that she is now a healthy, well-grown girl twelve years of age, who has never had any further convulsive seizure, and that there is no history of a special liability to fits in the family.

Notwithstanding the tendency of authorities to condemn attempts at the classification of convulsions, there can be little doubt that it would be desirable for practical purposes were it possible to disentangle from the *mêlée* of symptoms which are grouped under the general term certain types of disturbance. This has already been done in the case of laryngismus stridulus, and might, I think, with advantage be attempted in some other instances; for there is no reason why that sign should monopolise importance when there are many others quite as important and constant as it. An attempt to classify convulsions according to their exciting cause, if of some use in practice, has not necessarily a very distinct relation to the type of effect. Henoch,[1] for example, relates the case of a child two years of age who, having partaken of some saurkraut, manifested unusual sleepiness with irregular respiration, but whose pulse beat 120 times in a minute. In the case which I have related there was a like origin in indigestion, but there was also a prolonged inhibition of cardiac action which reduced the pulse-rate to an abnormal slowness. While, therefore, recognising the difficulty of distinguishing the chief lines of explosion in many cases of infantile convulsions, and without attempting to reduce these to order or law, it has appeared to me that there would be some practical utility in taking the condition of the heart's action as an index to treatment, and in emphasising this by a recognition of it in the symptomatic nomenclature of the disease.

In developing this line of thought I would refer to a case which I had an opportunity of seeing with Dr. Ostlere of Stoke Newington, not because of the rarity of such cases, but because its phenomena contrasted in most respects with my case, and because it seemed to respond as directly to a particular mode of treatment as did the case I have related. Dr. Ostlere has kindly given me the following notes. A male child thirteen months old and previously in good health fell out of his perambulator on Oct. 28th, 1892, and struck the back of his head. Next day he was seized with general convulsions. Dr. Ostlere quieted him with a chloroform inhalation, and left him apparently asleep, with a pulse of 130 and a temperature of 104° F. On the 30th the child had choreic movement of the limbs, was constantly protruding the tongue and opening the mouth "as if trying to retch," and had dilated pupils, which responded to light, with a pulse of 120 and a temperature of 102°. Bromide of potassium was prescribed. Two hours later the muscular jerking is stated to have been limited to the right arm and leg "when disturbed," the abortive retching continued, the pupils were normal, and the pulse was 130. Next day, being the fifth day of the illness, the child is noted to have been very quiet, to have noticed objects, and to have had a green watery diarrhœa. The pulse was 120 and the temperature 101°. Next day Dr. Ostlere notes that there was "more rolling of the head and jerking of the limbs on the right side. The pulse was scarcely perceptible and was uncountable; heart's beat by stethoscope from 220 to 230; temperature 101° and respiration 40; diarrhœa continues; takes the breast; five minims of digitalis were prescribed to be taken every four hours." On the seventh day of the illness the child remained in much the same condition. "The pulse was from 220 to 240; respiration from 50 to 60; diarrhœa; twitching limbs; no sickness; pupils dilated and acting." On the evening of this day I had an opportunity of seeing the case with Dr. Ostlere. The pulse, counted with the stethoscope, was 238 a minute, the respiration about 60, and the temperature 100·5. We agreed to apply ice to the head. Bromide of potassium was also prescribed. The remainder of the report I copy *verbatim* from Dr. Ostlere's notes: "Saturday, the eighth day: seems stupid; no crying; diarrhœa a little less frequent; takes the breast. They had applied ice in a bladder very irregularly, they said, as the child had begun to cough from the cold, as they supposed, so they left it off; in fact, I do not think they had used it for many minutes. Pulse from 200 to 210; respiration 58. Ordered ice-cap to be applied continuously. Sunday: child quiet; looking more sensible; diarrhœa better; pulse 120; respiration from 45 to 50. To keep on ice until evening. Monday: pulse 104; respiration 35; temperature 100°; cries on being disturbed; still jerking right arm and leg at intervals; seems to notice everything. I ceased attending after next day as the child was feeding and sleeping well, with no trace of the choreic condition, and a pulse of 94."

Whether some cases of what I may venture to term infantile tachycardial eclampsia, to distinguish them from cases such as that first related, are originally, and for a longer or shorter period, bradycardial, it is difficult to say, as it is rarely that the physician has an opportunity of seeing the patients at the commencement of symptoms. Writers frequently refer to an initial pallor, which it is theoretically possible to conceive as associated with cardiac arrest or inhibition; but cardiac action, to impress its character upon the symptomatology of a case, must be of a more persistent nature, as it was in the two typical instances adduced, and their successful treatment was based upon a recognition of the cardiac state. It is a commonplace of experimental physiology that direct or reflex irritation of the pneumogastric nerve produces an inhibition of the heart's action, and that this inhibitory influence of the vagus is abolished while the organism is under the influence of belladonna. It was a recollection of this fact, together with the history of the administration of improper food, that caused me to give that drug in the bradycardial case I have related. Professor Michael Foster[2] states that "after atropine, even in a minute dose, has been injected into the blood stimulation of the vagus, even with the most powerful currents, produces no inhibition whatever." It is interesting in view of this fact, however, to note that the sedative action of cold to the head while my patient was fully atropised seemed to cause a very sudden failure of the heart's action, as I have stated. In Dr. Ostlere's essentially tachycardial case, however, notwithstanding the length of time for which the child had been affected, and perhaps also because the patient was older, the continuous application of ice to the head, as far as could be judged, was directly curative.

If my treatment in the case first related should appear to have been somewhat too heroic, I must plead the justification of success and the apparent extremity of the little patient. Under similar circumstances I should certainly act on the same lines again, but should prefer the hypodermic injection of a smaller dose of belladonna or its equivalent in solution of atropine. As is well known, children tolerate preparations of belladonna comparatively better than adults. The generally acknowledged fact that very small doses of opium are frequently extremely prejudicial to young children would *a priori* suggest that larger doses of belladonna would be tolerated by them than one might otherwise suppose. Dr. Fuller proved this to be so in the case of twelve choreic children treated by him in St. George's Hospital. In a paper

[1] Diseases of Children, Translation of the Sydenham Society, p. 169, vol. i.

[2] Text-book of Physiology, p. 171, third edition.

entitled "On the Administration of Belladonna and the Causes which modify its Action," read before the Royal Medical and Chirurgical Society in June, 1859, he stated that "adults cannot tolerate doses of the drug which can be taken with impunity by children." I would suggest that it would be interesting to inquire whether, in the case of a certain drug being "badly borne" by an individual from idiosyncrasy or disease, its physiological antidote is tolerated better than usual. I have not, however, been able to discover many particulars of the use of belladonna in infantile convulsions, although it has been so used, and perhaps it is calculated to be of most benefit in those cases in which there is a tolerably clear history of pneumogastric irritation. Dr. Charlton Bastian, who writes the article on Convulsions in "Quain's Dictionary of Medicine," speaks of the benefit accruing from a combination of quinine, belladonna, and bromide of pottassium in some cases, but gives no special indications for the use of belladonna. *A priori*, one would expect it to be most beneficial in those cases in which physicians[3] have found nitrite of amyl to be of use.[4] I should, however, hesitate to employ either the one or the other were tachycardia present, and that because in infantile convulsions with quick heart and dilated pupil I have found belladonna to be as useless as it was useful in the case of L. B——, in whom the phenomena were of an opposite kind, and resembled very closely those of opium poisoning, from which it could only be distinguished by the presence of the limited convulsions related and the absence of a history of narcotic drugging.[5] The case recalled to my mind one of opium poisoning which I noted some years previously. A healthy male infant six weeks old was given fifty minims of laudanum by his mother, who was suffering from puerperal mania, at 8.30 A.M. on Nov. 6th, 1878. I saw the child at 9 A.M., when it was comatose, had a slow pulse and respiration, lids half closed and languidly raised on slapping the surface of the body, skin cold, and pupils contracted to pin points. The use of the stomach-tube, external excitation, and artificial respiration had little effect, but the hypodermic injection of a solution of atropine in small doses never failed very rapidly to quicken both pulse and respiration, and warm the surface. The child was thus kept alive for fifteen hours, when it ceased to respond to treatment and died. Although one-tenth of a grain of the alkaloid in all was injected, and an additional one-twenty-fourth of a grain was given by the mouth, the quantity was possibly too small to neutralise the effects of the original poison. I regret that I had not an opportunity of observing the effect upon the pupils of the atropine injected, as some was dropped into the eyes when the child was fully comatose and before he had time to absorb the few drops given by the mouth previously to hypodermic injection. The pupils were thus dilated by the local application. Graves found belladonna of use in continued fever with contracted pupil and coma, and Dr. Thomas Anderson, arguing from this experience, was the first to use the drug as an antidote for opium poisoning.[6] When, on the other hand, tachycardia is present, ice on the head is very effectual both as a febrifuge, if there be concurrent fever proportionate to the pulse-rate, and as a means of "pulling up" a "runaway heart" when fever is absent or not calculated to cause the rapidity of heart present. In the latter instance ice appears to act—(1) by direct sedation on the cardiac centre, and (2) by raising the blood pressure generally by a tonic influence on the peripheral vascular system through the vaso-motor centre.

Unlike the bradycardial case that forms the basis of this paper, such cases, on the other hand, present a close resemblance to the effects of belladonna poisoning, and while opium in the case of children is a double-edged weapon, its cautious use would be warrantable if the usual treatment by chloroform anæsthesia, bromide of potassium, or chloral proved ineffectual. Personally I have had no experience of opium in such cases, because my fear of its effects on infants has always held my hand, but Dr. Hughlings Jackson advises its use under certain circumstances in the form of Dover's powder. The cases in which he uses it are those in which there is least evidence of depression, and these are usually such as evince cardiac acceleration.[7] Dr. Eustace Smith[8] also recommends the hypodermic injection of one-twenty-fourth of a grain in a child twelve months old when the case resists other treatment. There are some other points in this connexion which are worthy of consideration. The child L. B—— was unconscious certainly from 5 A.M. on the 10th till 12 30 P.M. the same day, and probably for some time longer, while the contraction of the pupil was undone by belladonna and the heart's action synchronously released from inhibition between 5 A.M. and 6 A.M., and remained so, the former till 12 45 P.M. on the 12th, when they are noted as still being somewhat dilated, and the latter at the same date and time was practically normal. The acceleration of the heart and dilatation of the pupil, therefore, were not accompanied by a restoration of consciousness, although the pulse-rate, temperature, and respiration noted within that period indicated a vigorous flooding of the textures with blood. Dr. C. West[9] considers that "convulsions in the infant answer to delirium in the adult." Whether, however, we accept this dictum of so much respected an authority or not, unconsciousness will, I think, be generally regarded as an identical phenomenon at all ages, although its associated signs may differ somewhat. If this be so, the clinical history of L. B—— would seem to indicate that a restoration of diminished blood-supply is not alone necessary to a restoration of consciousness in such cases. The latter would then appear to depend upon a change in the cerebral nerve cells of a more intimate character—a change the chief sign of which is the unconsciousness in question, and which, if in the first instance active in the production of peripheral manifestations such as dilatation or contraction of the pupil and acceleration or retardation of the heart's action, cannot later be correctly measured by these.

Physiologists, again, have shown that the behaviour of the divided and stimulated cervical sympathetic, as regards its action upon the pupil, differs apparently from the effect of the same process on bloodvessels; for whereas the former is dilated the latter are contracted. The contracted pupil, therefore, so far as sympathetic irritation is concerned, is not brought about by the same mechanism as the contraction of bloodvessels, but appears in such cases, like the pupil of sleep, to be the result of anæmia of the brain and eye, and due in this instance to reflex spasm or bloodlessness of the cerebral vessels; or, like the pupil of chloroform and opium narcosis, to sedation of the nerve elements, with diminished functional activity. The dilated pupil of infantile convulsions, on the other hand, might conceivably accompany vascular spasm and be due to a like sympathetic irritation, for the retraction of the dilator iridis—an active dilatation of the pupil—would indicate spasm of the muscle under sympathetic innervation. One must, however, apply the conclusions of physiologists to practical medicine with caution, for in the patient we usually have a comparatively intact organism, with nerve junctions complete, and in which, therefore, a more complete mechanism has play than in the vivisected animal. Thus, in Claude Bernard's famous experiment, division of the sympathetic was followed by contraction of the pupil and dilatation of bloodvessels on the same side of the head—conditions, it is stated, which may subside in a few days, notwithstanding the removal of the superior cervical ganglion.[10] At the bedside, however, dogmatism is sometimes even less admissible than in the physiological laboratory. Thus, I have notes of a case of double pleuro-pneumonia, which was under my care some years ago, and which recovered, in which, while both lungs were "resolving," the patient had a circumscribed flush on both cheeks over the malar bones. When the right lung had in great measure recovered, the flush only appeared on the left cheek, on which side, also, the pupil was distinctly dilated. The left side of the face was likewise hyperæsthetic. These phenomena usually continued for about two hours each morning for a time, and could not be accounted for by decubitus or pressure. Here vascular coincided with pupillary dilatation, and was apparently curiously related in some manner to the removal of inflammatory products in the lung on the same side. Physiologists have demonstrated the influence of stimulation of afferent nerves in producing a reflex spasm of the vascular system.[11] In the case of L. B—— the *rationale* of the conditions

[3] Dr. Eustace Smith: Disease in Children, p. 303. Dr. A. E. Bridger: THE LANCET, April 22nd, 1882.

[4] Dr. Eustace Smith considers it is especially indicated in the convulsions which complicate whooping cough. Op. cit., p. 300.

[5] The diagnosis of post-eclamptic coma with contracted pupils from the coma of opium poisoning, in the absence of an avowed knowledge of the administration of opium in the form of "soothing syrup" or in any other vehicle, must always be very difficult, if not impossible, clinically; but the indications for treatment are fortunately the same.

[6] Edinburgh Medical and Surgical Journal, April, 1855.

[7] Reynolds's System of Medicine, vol. ii., p. 239.

[8] Op. cit., p. 300.

[9] The Diseases of Infancy and Childhood, sixth edition, p. 35.

[10] Foster, op. cit., p. 192.

[11] Foster, op. cit., p. 188.

which presented itself to my mind was the generation by irritation, in the digestive apparatus, of afferent impulses passing up the vagi, and resulting in pronounced cardiac inhibition, with peripheral anæmia. Professor Foster appears to regard the direct inhibition of the heart by vagus irritation as of like mechanism with the vascular dilatation which follows faradisation of a severed nerve such as the chorda tympani, and that, I presume, would establish a resemblance likewise with the heart of syncope, which one knows may result from emotional stimulation of the vagi. But the pupil of syncope is a dilated pupil, and seems to depend upon the general lowering of cerebro-spinal "tonicity," which results in vascular and muscular relaxation, and, when less extreme, in the disturbed metabolism and general atony of the neurasthenic invalid. In cases, therefore, in which we find syncopal states associated with a contracted pupil—a spasmodic, not paretic, condition of a muscle innervated by a cerebral nerve—and in which we can exclude narcotic poisoning, we must seek some other solution than that of a cerebro-spinal exhaustion. In the case of L. B——, therefore, associated as it was with a contracted pupil and apparently blanched brain, it is probable that the anæmia in question and retarded heart were associated with reflex vascular spasm. As, moreover, the afferent impulses active in the production of this state presumably travelled up the pneumogastric nerves, the atropisation of the patient was calculated to remove this causal element. That it did so may, I think, be fairly argued.

It is not remarkable that the behaviour of a structure so visible and so sensitive as the pupil should have been a favourite study both of physiologists and physicians. References to the subject are common in the text-books and periodicals of both branches of the profession. The clinical value of this sign, however, in any particular case has to be very carefully weighed. It may be of little consequence, or it may be all-important, but with pupillary contraction or dilatation in relation to more localised disease we are not at present concerned. That the relation of the general vascular tone to the state of the pupil is a constant one will not, I presume, be questioned. Watching beside a dying patient I have seen the pupil dilate widely and permanently at the moment of death. On another occasion which has impressed itself upon my memory a patient who had suffered from severe tonsillitis for some days, and who had refused food, on my puncturing his tonsil with a bistoury, fell back on his bed apparently dead. His heart and respiration ceased, his muscular system became quite flaccid, and the signal for these grave phenomena was a sudden and permanent dilatation of both pupils. He was fortunately resuscitated by artificial respiration. When, therefore, one meets, in cases in which there is a widespread disorder of the nervous system, as in infantile convulsions, with a slow pulse and contracted pupil there is, I would suggest, sufficient reason to assume that we have to do, not with a cerebro-spinal syncope, but with a powerful reflex vascular spasm in the first instance, associated with retarded cardiac action and rise of blood-pressure. It is probable, however, that another factor in the condition is the state of the nerve elements in the central nervous system induced by the preceding conditions of original stimulus of a nerve or nerves, and consequent arrest or diminution of blood-supply to the affected centres. Beyond this point speculation would at present be unwarrantable, although it is to be hoped that the changes inducing a disturbance of sensibility, and which precede observable histological changes in nerve cells, may yet come within the sphere of knowledge. At present the existence of these states is notified only by the occurrence of so-called "functional disorders." On the other hand, whilst one may admit that it is theoretically conceivable that dilated pupils may in such cases be associated with vascular spasm—and Dr. West[12] says that the pupil is either immovably contracted or dilated during the fit—if a dilated condition of the pupil be accompanied by a quick and feeble heart's action, it will, I think, usually be found to be associated with a paretic and syncopal state.

That the heart may be accelerated from other than peripheral vascular causes is well known. In a paper on the Origin from the Spinal Cord of the Cervical and Upper Thoracic Sympathetic Fibres"[13] Mr. J. N. Langley has shown that the first and second thoracic nerves appear to be most potent on stimulation, both to dilate the pupil and to accelerate the heart, and that such acceleration may be obtained independently of a rise in blood pressure. That some forms of emotion also act thus is a common experience; but that very want of language and intellectual activity which, as Dr. West[14] and others have remarked, renders the diagnosis of disease in children at times so difficult, has this countervailing advantage that it excludes in a great measure the disturbing factors due to emotion, which, when present, render it difficult to estimate aright the cause of some symptoms and the effect of some drugs. This fact, I would submit, only imparts greater value to the cardiac state regarded as the key to the treatment of infantile convulsions.

Upper Berkeley-street, W.

[12] Op. cit., p. 39.

[13] Philosophical Transactions of the Royal Society, 1892.

SOME CASES OF SPORADIC CRETINISM, TREATED BY THE ADMINISTRATION OF THYROID EXTRACT.

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THE following cases illustrate well the vast improvement, both physical and mental, that this form of treatment induces. It is well known that it exerts a rapid and remarkable effect in the allied condition of myxœdema, but the results in the case of sporadic cretinism are perhaps the more remarkable. In the former class of cases a function, either obsolete or in a state of abeyance, is recalled into activity; in the latter class that function is instituted afresh in cases in which it has never existed. Before giving the details of these cases I wish to make a few preliminary remarks. It was found to be impossible to make satisfactory collections of the urine for examination, the patients having no control over their sphincters previously to treatment; the estimations of urea, therefore, are founded on the average of the examinations of several specimens obtained at different times of the day. I regret to say that a systematic record of change of weight was not made in the earlier cases, but a general account of the changes in this respect will be found. No observations were made on the excretion of mucin, the treatment in these cases having been commenced prior to the publication of the results obtained by Dr. W. M. Ord and Mr. White. I now append the details of the cases:—

CASE 1.—This patient, a female, first came under my notice in November, 1890, at the Victoria Hospital for Sick Children, Chelsea. She then presented marked symptoms of cretinism. In March, 1892, Mr. Clutton implanted beneath her left pectoralis major muscle a small piece of fresh human thyroid gland, obtained from a case of parenchymatous enlargement of the thyroid, from which he had excised a portion. The child improved in nutrition for a time after the operation, but it was found that after the lapse of eight weeks the implanted gland was practically absorbed, and the improvement ceased. She was readmitted in February, 1893; her age was then six and a half years. There was no history of insanity in the family, and her parents were in no way related. She had never walked, but could move herself about the floor, though she did not crawl like an ordinary child. She was extraordinarily like a monkey in appearance. Her hair was scanty and ragged, and her neck was thick, with lumps above each clavicle. No thyroid gland could be felt. She was on the whole good-tempered, but subject to fits of passion. Her skin was dry and never perspired. She could barely stand with assistance. Her legs were bowed, in a manner suggestive of rickety deformity. There was also some enlargement of the wrists. (See Fig. 1.) Her intelligence was small, but she seemed to appreciate sweet foods, and to like to be noticed by visitors. The urine when collected was light in colour, of sp. gr. 1008, and contained no albumen. The average of several examinations showed that there was present 0·4 per cent. of urea. Her temperature was, on the whole, subnormal, but occasionally it rose to normal—never above it. She commenced her thyroid treatment on March 1st. At first she was fed on the raw gland, minced, pounded, and mixed with jam. She did not like this, and on March 15th she was given the prepared powder of thyroid, the equivalent

[14] Op cit., p. 3.

of two-fifths of a gland being administered in the twenty-four hours. This treatment was continued for a fortnight, after which time she was given the compressed powder in the form of a tablet, each tablet containing five grains of the powdered extract. One of these she has continued to take daily up to the present time. She never seemed to experience any ill-effects from the administration of the extract, although she took large doses as compared with those given to adult patients. Her temperature in a few days rose to 99° F., but never went higher, and she had no vomiting or lassitude. On March 18th her urine contained 3·5 per cent. of urea, and on March 22nd 4 per cent. Physical improvement began to be manifested in about a week. The general nutrition began to improve, the skin became soft and moist, and the hair lost its harsh, dry feel. She did not make much progress in locomotion until she had been under treatment for about three months, when she began to stand alone. At the present time she can walk across the ward without assistance, her gait, however, being rather tottering and uncertain,

FIG. 1.

Before treatment.

due partly, no doubt, to the deformity of the legs. Her abdomen is still prominent, but Fig. 2 shows how she has improved in appearance and condition. The elongation of the neck is especially noticeable. When at play with the other children she talks to them and makes them understand her, but I have never been able to induce her to speak to me. She makes known her wants to the nurses, and her habits are much more cleanly than formerly. Her urine now contains 1·6 per cent. of urea. She is at present making a steady gain in weight, averaging half a pound per week.

CASE 2.—This patient, a male aged three years, was admitted to the Victoria Hospital for Sick Children, Chelsea, in February, 1893. He had been under observation since the previous August. He was born in Poplar, and his parents were both Londoners, there being no consanguinity between them. There were four other children, all living and healthy, but one child had died, aged five weeks, from spina bifida. It had webbed fingers. The patient had always been dull and backward, and could not speak; he began to walk at the age of two years; he had always had frequency of micturition, and his general habits were dirty; he was a broad, dwarfed, bow-legged child, with a large protuberant abdomen and a thorax short and barrel-shaped, and his general condition was good; he had the usual facial appearance natural to the disease; his movements were slow and clumsy, and he often fell down. No thyroid could be felt, and there was no supra-clavicular enlargement; the skin was dry; the temperature was very slightly subnormal. The temper was variable, but, on the whole, he was good-natured. The urine was very pale and contained a slight mucous deposit; the total amount could not be obtained, but the average of specimens examined showed urea to be present in the proportion of 0·7 per cent. On Feb. 24th he commenced a diet of minced thyroid gland with jam, one-sixth of a gland being administered per diem. This was altered to the prepared thyroid powder on March 15th, and this again was replaced by thyroid tablets in a fortnight's time. These he has been

FIG. 2.

After treatment for six months.

taking daily ever since. On March 21st he was passing 2 per cent. of urea in his urine, the total quantity being collected. He left hospital on April 26th and has since been attending as an out-patient. His progress was more rapid than that of Case 1, possibly because he was younger, and also because his malady was less serious in character. He bore the treatment well, and his temperature never rose above 99° F. His mental and bodily powers increased rapidly, and from being dull and phlegmatic he developed a restlessness and a taste for exploration that rendered it difficult to keep him within bounds. His weight, which was 2 st. at the commencement of treatment, fell on March 19th to 1 st. 12 lb. and on April 24th to 1 st. 9 lb., although his health was steadily improving all the time. Then it began to rise, and he now weighs 2 st. 1½ lb. He is growing rapidly, and, as will be seen in Fig. 4, in addition to facial improvement he has lost the distended abdomen. He can converse readily, and his mother declares that he is more intelligent than

other boys of his age. His urine now contains 2·8 per cent. of urea. He has quite lost his dirty habits.

CASE 3.—This was a male infant aged nine months, who was first seen on March 4th, 1893. He was brought to the Victoria Hospital for Sick Children, Chelsea, on account of his tongue, which was increasing rapidly in size and interfering with his power of taking food. He was of a typically cretinoid appearance, the facial and bodily conformation being well marked. The tongue protruded about half an inch beyond the lips and almost filled the buccal cavity. It was slightly bifid in appearance, and there was a constant flow of saliva. The family history showed nothing that could bear upon the case. There was no thyroid gland to be felt, and there were marked supra-clavicular swellings. No urine could be obtained. The child remained under treatment in hospital for a week, and then, owing to an outbreak of infectious disease, became an out-patient. He was treated with one tablet of compressed thyroid powder (five grains) daily, and under this treatment there was a slight rise of temperature, averaging about 99° F., but there were no other symptoms. The tongue regained its

FIG. 3.

Before treatment.

normal dimensions in a fortnight from the commencement of treatment. The child soon improved in general nutrition, grew rapidly, and began to exhibit signs of incipient intelligence. Unfortunately he succumbed to an attack of diphtheria in August, and owing to this and to his short stay in hospital there is no photographic record of his case. His improvement, however, seemed, if anything, to be more rapid than that of any of the other cases.

CASE 4.—A male child aged nine years and a half was admitted into the Victoria Hospital for Sick Children, Chelsea, on May 25th, 1893. His father and mother were first cousins. There were three other children, who were healthy. Before he was two years old his parents noticed that he did not progress as other children did, and as he grew older his "backwardness" appeared to be more marked. In the summer of 1891 he was brought to Mr. Clutton on account of a deformity of his back, supposed to be due to caries. Mr. Clutton, however, recognised the condition, and concluded that the curvature was a part of the disease. He ordered him a support for the head, as the weight of the latter appeared to increase the deformity, owing to the weakness of the spinal muscles. He had been wearing this support ever since, and his parents said that he had been greatly benefited by its use. When admitted on this occasion he presented the typical appearance of a cretin; his intelligence, however, was much in advance of that of the average case. He knew his letters, he could converse reasonably, played with toys with evident pleasure, and seemed to have a good idea of the size and shape of things. He could walk and run, and seemed to prefer being in motion to being at rest. His temper was capricious, but in place of the usual bursts of anger he was affected with fits of despondency, during which his appetite, which was naturally fickle, appeared to fail him completely. He was 34 in. in height. There was a very marked antero-posterior curve of the spine at the junction of the cervical and dorsal segments. The curve was rounded and in no way angular. The vertebræ from the fourth cervical to the eighth dorsal were bowed backwards, and the lumbar spine was bowed forwards in a corresponding manner. This deformity did not appear to be due either to caries or rickets.

FIG. 4

After treatment for four months

Dr. J. S. Bury of Manchester, in his article on Cretinism in "Keating's Cyclopædia," describes this condition in the following words: "In cases seen by the writer the lower cervical and upper dorsal vertebræ formed a rounded prominence behind, while the lumbar region presented a deep concavity as if dragged forward by the enlarged and protuberant abdomen." The legs were bowed, and the feet and hands were large. The hair was scanty, the skin dry and rough, and the nails were thick and coarse. No thyroid gland was to be felt, and there were no supra-clavicular enlargements. The urine was clear, of sp. gr. 1012, light-coloured, and contained no albumen. There was on the average 4·4 per cent. of urea. The temperature was, on the whole, slightly above normal. He commenced to take the thyroid tablets on June 8th, taking daily one tablet of compressed thyroid extract, being equal to one-sixth of a gland. This treatment he has continued up to the present time. His temperature was slightly higher on the whole after the commencement of treatment. It rose on June 18th to 104° F., owing to an attack of tonsillitis. His weight at the commencement of the treatment was 2 st. 5 lb.

His general health was good, and his appetite improved, but he steadily lost weight. This continued for some time, his weight on Aug. 15th being but 2 st. He has always been a very difficult child to feed, and during the hot weather in August last he could hardly be induced to take any nourishment. Thinking that the treatment might have something to do with this, I discontinued giving the extract for a week, but this seemed only to make him weaker in body and extremely depressed in spirits. Since the weather became cooler he has improved; his appetite is better, and his weight is 2 st. 3½ lb. In his case the improvement was less remarkable than in the others. His condition, especially mentally, was not nearly so serious, and he has hardly yet begun to feel the bodily benefit, which appears late in the treatment, and which I shall notice below. He was passing in his urine in the second week of October 2·4 per cent. of urea. His height now is 35½ in., being a gain of 1½ in. in less than four months. This is no doubt due in part to the fact that his deformity has been treated by massage and suspension.

Remarks.—In reviewing these cases there are certain points that present themselves for consideration. In the first place, the absence of symptoms of discomfort due to the treatment, such as are usually noticed in myxœdema, must be observed. The doses given were quite equal to those given to adults, and beyond a very slight rise of temperature no perceptible discomfort was apparent. Symptoms of improvement, however, did not occur so soon as in cases of myxœdema, no change of any importance being noted in the first week. It will be seen that in three of the cases there was a marked decrease in weight at first, this being accompanied by a decided decrease in bulk. After a time, however, the weight showed a progressive increase, due, apparently, to a deposit of adipose and other healthy tissues. Whether the decrease was accompanied by a marked excretion of mucin in the urine could, as I observed above, not be demonstrated; probably, however, this was so. With regard to the excretion of urea, in Cases 1 and 2 this was decidedly increased under the treatment. In Case 4 the percentage before treatment was largely above the normal, and subsequently diminished. I could find no explanation for this phenomenon. The rate of improvement seemed to have a definite relation with the age at which the treatment was commenced, being most marked in the youngest (Case 3) and least marked in the oldest (Case 4). Cases 1 and 4 developed, under treatment, profuse sweating of the head, accompanied by a disagreeable odour, almost fæcal in character. It may be noted that three of the four cases were males. The engravings are from photographs.

Queen-street, Mayfair, W.

A CASE OF
SPORADIC CRETINISM IN AN INFANT; TREATMENT BY THYROID EXTRACT.

BY A. GORDON PATERSON, M.A., M.D. EDIN.

IN view of the great benefits derived by myxœdematous patients from treatment by thyroid extract, in whatever way administered, the following case of a sporadic cretin infant and the results obtained therein from the thyroid extract may be of interest as indicating a possible plan by means of which the condition of the unfortunate victims of the disease may be greatly ameliorated if not cured.

A male infant first came under my observation when eleven months old. The parents were healthy young people, being both sober and hard-working; there was no consanguinity between them. I could not discover, after most careful investigation, any trace of disease in either of the parents' families or in any of the collateral branches. The child was breast-fed till he was seven months old, when he was fed by the bottle. He was brought to me on account of obstinate constipation and non-closure of the fontanelles. At seven months it was noticed that the bowels were very confined and that simple remedies had lost their effect. It was also thought that he was backward. At nineteen months his condition was practically the same, with the exception that he had grown a little. The general condition of the infant at eleven months of age was as follows: There were no signs whatever of teething. He had never suffered from diarrhœa; he had not had convulsions or any febrile disease. His height and weight were not recorded, but at nineteen months his height was 25 in. The head was large and the anterior fontanelles were very open, the division of the frontal bone being easily felt. The occipito-parietal junctions were very open, and on the right side there was a triangular space devoid of bone; all the sutures were very wide apart. The hair, which was brown in colour with a reddish tint here and there, was very scanty, fine, and short. The scalp was covered with branny scurf. The face was of a dirty yellow colour, with no blush on the cheeks or nose. The eyelids were reddish and the veins distinct. He suffered from ciliary blepharitis occasionally. His nose was a short pug, and very broad and flat at the root; the cheeks were thick and pale; the mouth was open; the tongue was very large and always protruding; the ears were moderate in size, but waxy; the neck was thick and short. The sterno-thyroids were very distinct; no thyroid gland could be felt, but there was a slight swelling over the right clavicle; there were no pseudo-lipomata. The abdomen was barrel-shaped and very tense, the veins being very distinct; it was, like the whole body of the child, very bluish and mottled. There was a small umbilical hernia of the size of a hazel-nut. The limbs were hard, swollen, stumpy, and very cold and purplish. The mottling was most marked from the elbows to the finger tips, and similarly in the legs from the knees to the toes. The hands and feet were remarkably thick and swollen with firm œdema, and they were very cold. There was a slight anterior curvature of the tibiæ, otherwise no signs of rickets were present; there was no beading of the ribs. The spine was kyphotic. There were no fatty growths or hairy growth between the scapulæ. The skin was always dry and harsh. There were no moles, warts, nævi, eczema, or ichthyosis. The secretion of sweat was almost entirely absent; saliva was abundant, but there was no nasal secretion. The muscular development was apparently absent, but this was due evidently to the thickening of the limbs, as shown by the results after treatment. The reflexes were normal as far as could be judged, but it was difficult to be certain. The skin sensibility was fair; the sight and hearing were good. The left testicle was quite down, but the right was not yet in the scrotum. The rectal temperature was 97·2° F. The child was extremely susceptible to cold and liked to be always placed near the fire. The voice was harsh and thick when crying, for he could not say a word and hardly made a sound. As regards mental development, spontaneity was absolutely absent. There was no intelligence. The sleep was variable. The child was very anæmic; the appetite was good; the bowels were very constipated and the motions pale; the liver and spleen were not enlarged; the urine was a clear yellow; the heart was normal, but the pulse was very feeble; the respiration was noisy, but regular; there were no enlarged lymph glands. The only differences noticeable between the condition at eleven months and nineteen months were as follows: The anterior fontanelle was still very open, but the left parieto-occipital was closed, and in the right a Wormian bone could be felt; the sutures were closing up; the hair was more abundant; the redness and veins of the eyelids had disappeared. The veins of the abdomen were mostly gone, and the mottling and tenseness were less; the umbilical hernia was smaller. The muscular power was improving, but he could not yet sit up and could only just move the limbs. The rectal temperature was 96°; in the groin it was 95·8°. The mental development was improving, as he could put out the hand and place the tent of the bottle in his mouth. He now recognised his father and mother, and occasionally smiled to them. He could drink only while lying down and from the bottle, as all the fluid escaped when he was sitting up, owing to the size of the tongue. These, briefly, were the chief points noticed when the thyroid treatment was begun. This consisted in the administration once daily of ten drops of the extract, plain.

I will now shortly note his condition after five months' thyroid treatment. After the third dose of the extract it was noticed that the face seemed to be smaller; the tongue was perceptibly more in the mouth, the hands were softer, and spontaneous action was greater, as was shown by his rubbing his eyes and grasping anything held towards him, which result was undoubtedly due to the softening of the arms allowing of motion. After the fourth dose he had a bad cold, and the extract was discontinued, but as symptoms of bronchitis threatened it was resumed, and, curiously, the next day the whole of the catarrhal and febrile symptoms disappeared. After the sixth dose the tongue had become, though still very large, quite flat, and was wholly within the mouth, and when he cried the cavity of the mouth and throat could easily be seen, which was an impossibility before. The

next point is that the bowels had become quite regular and good in appearance. The urine was not in any way affected. The most marked feature, with the exception of the diminution in the size of the tongue, was that the child had lost the cold feeling, and even when left alone in his crib no longer became cold—in fact, his bodily temperature was at this time always practically normal. At the end of a week his limbs had become quite soft and pliable, and he could even sit up in his perambulator with a little help. He noticed things a great deal, and his colour was nearly natural. At the end of a month he began to show signs of teething and now at the end of five months he has eight teeth. He can sit up alone and crawl on the floor, is active, and tries to say a few words. When placed on his feet he makes attempts to walk. The fontanelles are closed, except the anterior, which is still slightly open. Such, briefly, is the extraordinary improvement obtained by five months' thyroid treatment, where during the previous eight months the condition had remained *in statu quo*.

One further note in regard to the case. In December, 1892, the mother gave birth to a female child. The labour was easy, but it was a breech case. The child was born alive, but only lived for about twenty minutes. The placenta was very small, and the membranes were very tough and gelatinous. The weight of the child was 10 lb. 14 oz.

P.S.—At present (after eight months' treatment) the child has sixteen teeth, can stand, and tries to walk. He also manages to say several words.

Ascot.

A CASE OF SPORADIC CRETINISM TREATED BY FEEDING WITH THYROID EXTRACT.

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THE following case is published to show the benefit which may be obtained by feeding a cretinous child with thyroid extract. The patient first came under my care in February, 1892, when she was two years and four months old. She then showed symptoms of rickets combined with sporadic cretinism. She had no teeth; the fontanelles were open; the ribs were beaded, the epiphyses swollen, and the tibiæ and fibulæ were curved. The eyelids and cheeks were swollen and puffy, the lips were prominent, and the tongue was too large. Subcutaneous myxœdematous swellings, of harder or softer consistence, were found under the chin, over the posterior triangles of the neck, on each side of the lumbar spine, over the back of the upper arms on both sides, and over the origin of the flexor and extensor muscles of the wrists and hands. The hands were swollen, and the ball of the thumb on both sides was thickened by marked swelling. The legs and feet were also irregularly swollen, the swellings being specially marked upon the front of the two thighs. There was no pitting anywhere. The child had umbilical hernia and a greatly distended abdomen, but the liver and spleen were not enlarged. The skin was harsh and rough, the hair being coarse. The complexion was sallow and pale, with a dusky tinge on the forehead and temples. There was convergent strabismus, and nystagmus was frequently observed. The extremities were habitually cold and bluish. The face had a vacant expression. The child took little notice of anything. She cried almost constantly, and could not stand, sit, or crawl, or speak a single word. The mother said that she herself and her husband were healthy, and that she had a younger child four months old, who also was healthy. The patient was suckled for thirteen months. She had had bronchitis often, but no diarrhœa or convulsions. Her present condition had developed gradually. The tongue was always large. The nystagmus was seen first at the age of sixteen months. The subcutaneous swellings had developed more recently. Figures 1 and 2, taken from photographs of the child, show very well the characteristic expression of the face and the irregular "lumpiness" of the back, neck, and limbs. In March, 1892, the child was shown at the Leeds and West Riding Medico-Chirurgical Society as a typical case of sporadic cretinism. I had the patient under observation for

FIG. 1.

Before treatment.

FIG. 2.

Before treatment.

a year, and gave her simple treatment by cod-liver oil, iron, arsenic, &c. At the end of this period her condition was substantially unaltered. She had four incisor teeth, and was, perhaps, slightly more intelligent, and could just articulate "da, da" imperfectly, but was in other points as marked an example of cretinism as ever. On Feb. 3rd she was ordered to take by the mouth three days a week half a drachm of thyroid extract. On Feb. 17th the dose was altered to fifteen minims every week-day. At the end of a month I was able to make this note: "March 3rd: The whole aspect of the child is changed; she looks sharper and brighter, and her eyelids and cheeks are less swollen. The lips are thinner, the tongue smaller, and all the myxœdematous swellings throughout the body are smaller. The hands and feet are warmer. She eats better and tries to talk." On March 17th it was noted that she perspired a good deal, a thing which had never happened before the present treatment. The swellings were much less. On the 24th the hair was coming off the occiput. She had cut another incisor and one

FIG. 3.

After three months' treatment.

premolar. The skin was much healthier in colour. On April 7th it was clear that the abdomen was much smaller, and the umbilical hernia was disappearing. On the 14th the mother reported that the child had begun to sleep with the mouth shut. On the 21st fresh hair was growing on the occiput, and on the 28th she had nine teeth and was gaining in weight. On May 4th there was no abnormal swelling or thickening to be observed, and the thyroid extract was discontinued for the time being. The child was photographed at this date. Fig. 3, which was taken from the photograph, does not show the limbs well, owing to the restlessness of the child at the time, but the change in general aspect and expression is unmistakable. No feverish reaction was noticed during the thyroid feeding, but as the child was treated as an out-patient the information is not reliable on this point. The improvement in the patient began almost at once, and struck everyone who had seen her previously. On June 23rd her condition was as follows: The fontanelles were nearly closed, the rickety condition was less marked, there was no hernia, the abdomen was less in size, and the nystagmus was only rarely noticed. The patient had twelve teeth, she was stronger, could sit but not stand, and can only say one word; she cried less and was sharper and brighter and more intelligent. There was no myxœdematous swelling to be observed.

Leeds.

ON SOME VARIETIES OF BRONCHOCELE.

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THE following cases are reported in order to illustrate some of the varieties of bronchocele and the operative measures undertaken for their relief. The first six are examples of bilateral goitre, in which the whole gland is enlarged, the isthmus in some being large, in others small. In this form complete removal of one lobe or resection of one or both lobes was performed. The second group of cases contains examples of the localised forms, either cysts or adenomata. In this form, as will be found on perusing the account, the tumours were enucleated without removal of any part of the gland.

GROUP I.

CASE 1. *Dyspnœa from simple goitre; removal of the isthmus, with complete recovery.*—A youth aged seventeen was admitted to hospital on Sept. 22nd, 1887, with general enlargement of the thyroid gland and particularly of the isthmus. It began three years before. He had always lived in Kent and until shortly before this date had worked as a labourer. He was now unable to work owing to the dyspnœa produced on stooping. This seemed to be a suitable case for division of the isthmus, as the enlargement was a general one, and there was no pulsation or any exophthalmos, while it was, at the same time, soft and compressible. On Oct. 6th the isthmus was exposed and found to be very wide and thick. It was ligatured at the junction with the lateral lobes and removed. The mass was about the size of a large chestnut. Next day the drainage-tube was removed, and on the second day the sutures. A little suppuration occurred in the upper part of the wound, owing to imperfect drainage, and delayed his discharge, which did not take place till the sixth week. There was a marked diminution in the size of the lateral lobes at once, so that when he was lying down they were not visible. Mr. Sturge of Eltham sent the following report: "I knew the lad about three years and a half ago. He was then a victim to marked bronchocele, and gained a very scanty livelihood by sitting in a coal office to receive orders. Since leaving school he had tried to do manual work, but had to give it up through physical weakness. Accordingly I sent him to you with a recommendation for operation. I am happy to say that since being operated upon by you the youth's position in the world has changed. He did quarrying all last summer, and this is reckoned severe toil. Before operation he always wheezed loudly in respiration. I now notice no laboured breathing. His mother lives at Sevenoaks, and has an exactly similar condition of things. The huskiness of voice the patient had before operation is absent after ordinary work, but after more than ordinary exertion he has it considerably." This report was written in April, 1890—that is, nearly two years and a half after the operation. When last seen by me, about two years after the operation, there was no return of the enlargement. The immediate relief in this case would seem to have been due to the removal of the pressure caused by the isthmus, for the part was very large, while the lateral lobes were comparatively small.

CASE 2. *Acute simple bronchocele; division of the isthmus for relief of dyspnœa; persistence of symptoms; subsequent thyroidectomy, with complete relief.*—A youth aged seventeen was admitted on Feb. 11th, 1890, under the care of Dr. Taylor, into the John Ward, Guy's Hospital, with urgent dyspnœa, due to a large and rapidly increasing goitre. He came from Norwood and gave a good family history. When a child he attended St. Thomas's Hospital for suppurating cervical glands. The enlargement was first noticed eight months before and had gradually increased. He had no particular trouble till a few weeks before admission, when his father noticed that he snored at night and breathed heavily at times in the day. Beyond this he was not inconvenienced till three days before admission,

when he began to have serious difficulty in breathing, so that he could not make any exertion. He also made a loud snoring noise at night. I was first asked to see him by Dr. Taylor on the evening of the 11th. The patient rested, propped up on pillows, with his head thrown back, and breathed with the greatest difficulty. The neck was very large and was traversed by distended veins. Though the breathing appeared to be so laboured, he complained of less distress than one might have expected. When he dozed he made a loud noise in the larynx or trachea, resembling that made by a man suffering from aneurysm. As the patient did not seem to be in imminent danger, and as there was no spasm when the larynx was handled, it was decided to postpone the operation till the following morning. The house surgeon was, however, prepared to perform tracheotomy at any moment. On Feb. 12th it was decided to resect the isthmus. This part of the gland was large, and it seemed that if removed the lobes would separate and the pressure be relieved. This operation was proposed, also, as the enlargement appeared to be a simple hypertrophy of the entire gland. There was no pulsation and no protrusion of the eyes. A little chloroform was administered and a vertical incision was made in the middle line. A violent spasm at once set in, and the breathing ceased. After waiting a moment to see whether the glottic spasm would pass off, and on finding that the condition was becoming alarming, the large isthmus was pulled down and the trachea was opened. By this time the lad had become quite blue. However, by turning him over on his side, and performing artificial respiration, he came round. The isthmus was then tied with two silk ligatures and divided. A large tube was inserted, through which respiration was easy. Next day it was evident that the tube did not reach low enough, a circumstance pointing to the existence of obstruction below the level of the isthmus. A Hahn's tube was inserted with immediate benefit. Later it was found that he was most relieved by a piece of long rubber tube which passed well down the trachea. As by this time the wound had closed tightly round the tube, and the patient was in all other respects well, an effort was made to dispense with the tube. Within a few days of the division of the isthmus a marked diminution in the size of the lateral lobes was noticed. He managed to keep the tube out during the day, but at night had much dyspnœa and made the loud roaring noise that he did before the operation; it was so loud as to keep all the patients awake. He went out in the ground during the day, and, apart from the trouble at night, was well. The clinical clerk, Mr. Austin Smith, took the greatest pains in order to get the patient to do without the tube, watching him both day and night. It now seemed to be quite clear that the pressure was caused by the lateral lobes, and that the only method of relief lay in the extirpation of one of these. This operation was rendered more difficult by the presence of the tracheal opening. On April 21st a Hahn's tube, well surrounded with iodoform gauze instead of the compressed sponge, was inserted. This answered admirably, and during the operation no blood entered the trachea. The whole of the right and larger lobe was removed by opening up the old cicatrix and making a Y-shaped limb from its upper extremity outwards. The lobe proved to be a very large one indeed; it reached from the hyoid bone to the sternum. No special difficulty was encountered. Primary union took place in the whole of the large space from which the lobe was removed. On the third day the drainage-tube and the tracheotomy-tube were both removed. A rubber tube was worn in the trachea for a few days longer. On the eleventh day he was allowed to get up. The loud snoring noise at night was still occasionally heard, and was still loud enough to keep the patients awake. It was hoped that it would disappear when the trachea recovered its shape, for the latter was found to be distinctly flattened from side to side. The patient left the ward on May 9th. On two or three occasions after his return home the nocturnal snoring returned. When last seen (two months after the operation) he was quite well; the snoring had entirely disappeared, and he had improved in colour and in health. The left lobe had not increased in size and gave no inconvenience whatever. The structure of the lobe removed was of uniform texture throughout. The disease was a hypertrophy; there were no cysts or any adenomata. The lobe was firm and was deeply grooved by the trachea.

CASE 3. *Large multilocular bronchocele; extirpation of both lobes.* — A lad aged fifteen, who was sent by Mr. Rowlands of Towyn, was admitted to hospital on Oct. 11th, 1887. The boy had an enormous lobulated bronchocele; the swelling involved the whole gland and projected beyond the side of the head. Some of the masses fluctuated and were apparently cystic, while all were freely circumscribed and movable. The two halves came together in the middle line, so that no isthmus was to be felt. The circumference of the neck was 17½ in. On the 18th the whole of the right lobe was removed. There was considerable hæmorrhage from the large and dilated veins. The isthmus was scraped nearly through by following the sulci, without any bleeding; the small remaining band of connective tissue was then ligatured with gut. The trachea was found to be flattened from side to side. The boy had the usual slight cough, with breath fetor, for a couple of days. The drainage-tube was removed on the third day and the sutures on the fifth day; the union was therefore primary. The neck then measured 14½ in. The boy was sent to a convalescent home for a few weeks prior to the other side being operated upon. On Feb. 10th, 1888, the second operation was undertaken. It was decided to leave the upper part of this lobe; it formed a rounded lobule and was thought to be solid. When exposed, however, it was found to be a cyst, and by this time the lower part of the lobe had been isolated, leaving only that part attached to the old cicatrix. This portion, a mass about 2 in. by 1 in., was left. It was thought that it would have a sufficient blood-supply to prevent sloughing and to carry on the function, but not sufficient to produce rapid growth. A great deal of blood was lost in the early part of the operation from the inferior veins, which were torn while raising up the lobe. For the first four days he had slight fever, with swelling of the neck. On the fourth day a large slough, composing apparently the entire mass left, came away. After this the wound quickly closed. On May 2nd he was sent home to Wales. The portion of gland left evidently had not a sufficient blood-supply. As far as could be ascertained no part of the gland was left, and though the lad was far more comfortable the onset, at some future time, of the cachexia was feared. Mr. Rowlands kept the lad under observation and reported two years and a half after the operation that he showed no signs of myxœdema, was intelligent, and worked on the farm as well as other boys of his age. Three years and a half after the operation the boy, who was then eighteen years and a half of age, was shown at a meeting of the British Medical Association at Norwood, and was examined by many of the members. There were no signs of the cachexia following complete removal of the gland. He had grown some three inches, and was bright and intelligent. It required a careful examination to discover a small rounded nodule on the left side about the size of a filbert, this being the only representative of the thyroid gland. It appeared to be sufficient to carry on the functions of the gland.

CASE 4. *Large multilocular goitre; extirpation of the right lobe and resection of the left.*—A girl aged sixteen was sent to me by Mr. Rowlands of Towyn. She had an enormous goitre. (See Fig. 1.) It was composed of many lobules, all of which were elastic and some fluctuating. Both lobes were enlarged, but the right was a little larger than the other. The lobes met in the middle line, so that no separate isthmus could be defined. The girl was terribly deformed by the goitre and, besides, had loud stridulous breathing. She was a sister of the preceding case, who had been operated upon two years previously. The clinical appearances of the two cases were identical. The girl was under-sized, but had a well-developed head and a quick intelligence. The whole of the right lobe was removed through a median incision. The veins were very large indeed, and several bled profusely. There was the same difficulty in separating the lobe from the trachea. In this case the spray was not used, and the wound was freely irrigated with sublimate (1 in 1000). Primary union took place, only one antiseptic dressing being required. The sutures were removed on about the fifth day. The left lobe swung across the middle line so that the upper end projected below the angle of the jaw, while the lower was on the left side, near the sternum. The lobe was composed of a number of separate rounded masses, each in a capsule of its own, and all were united by a vascular, fibrous connective tissue. A few of the masses had cysts in the interior. At one part there was a broad piece of tissue marked by fibrous septa and looking like the lobe itself; indeed, the whole appearance suggested that these separate lobules might have been enucleated. Against this theory, however, was the fact that everywhere there were smaller cysts and adenomata. Still it was decided to make the attempt to reduce the left lobe by this method before

resorting to that of Mickulicz. On July 17th the second operation was performed. The median cicatrix was opened and one of the lobules was exposed. After a little careful dissection it was turned out, but, unlike the localised cysts and adenomata, the capsule bled freely. In attempting to enucleate another, the cyst wall was ruptured and some smart bleeding took place from its interior. The upper part was removed by ligature, which was accomplished after tying the superior thyroid artery. Raising, next, the lower end of the gland, a large cyst was found, looking as if it might be enucleated. This was done without any severe bleeding. The inferior thyroid vessels were exposed, and the artery, a large thin-walled vessel, was ligatured. Then, in order to further reduce the size of the gland, several masses were tied and cut away. The tracheal portion of the gland was not disturbed, nor was the region of the recurrent laryngeal nerve, as is done in the operation for removal of an entire lobe. On the same evening the wound had to be opened on account of hæmorrhage, which had come on suddenly three hours after the operation. The bleeding came from the inferior thyroid vein, or a large branch of it. After ligating this vessel the wound was stuffed with gauze. In two days the dressing was changed. The girl was very well, having no fever or swelling. On the tenth day all sutures were removed, and on the fourteenth day she was out in the grounds. (See Fig. 2.)

FIG. 1.

The next two cases are examples of soft, pulsating goitres, in which many of the symptoms of Graves's disease were present.

CASE 5.—A young man aged nineteen was sent by Mr. De'Ath of Buckingham. He was well grown and had a large bilateral goitre, which was soft and compressible and distinctly pulsated. There was a loud buzzing bruit to be heard on both sides, and he had moderate dyspnœa. The pulse was somewhat quickened, and the vessels were soft. There was no protrusion of the eyes, but Dr. L. E. Shaw, who saw the case with me, agreed that probably the boy would develop the further symptoms of the exophthalmic variety. With a view of testing the value of operation in such cases, the greater part of the right lobe was removed by ligature (Mickulicz). The tissue was exceedingly vascular, and at times the bleeding was severe. The isthmus was about the size of a lead pencil and did not appear to share in the general vascularity. Some swelling of the stump followed, and a sinus remained for some weeks, through which several of the silk sutures came away. The left lobe, as usual, swung over to the median line, and the neck looked more symmetrical. The part of the right lobe that was left appeared to increase after some weeks, and so did the left lobe, which at first appeared to subside. On presenting himself, however, some months later to have the left lobe resected it was found that it had shrunk to such an extent as to render further operation unnecessary. There was no pulsation or bruit, and the young man's health had improved. It is to be noted that there had never been any nervousness.

CASE 6.—A girl aged seventeen had a large bilateral goitre, the neck measuring fifteen inches and a half; it was soft, pulsatile, and gave a loud humming bruit; she was pale, nervous, and thin, as well as very excitable and restless; the pulse was 120 and soft; the skin was moist; the voice was husky, but both cords moved well; there was no exophthalmos. Her twin sister exhibited exactly the same disease in all particulars, but she was not quite so well grown. As the ordinary treatment failed to effect any improvement the right lobe was (on Oct. 10th, 1891) removed in parts by ligature. The amount removed weighed six ounces. It was intended to resect part of the left lobe also, but as the patient was feeble and as a good deal of blood had been lost it was not done. Primary union took place. The patient was exceedingly restless and excited for two or three days. Unfortunately the recurrent nerve was injured, and the right cord was paralysed. Six months later the two sisters were examined, and never was a greater contrast presented. The patient had grown taller, had gained much flesh, and had lost all the sallow complexion, having then a healthy, rosy tint. She, moreover, had lost her nervousness, the left lobe had shrunk to very moderate dimensions, and the pulse was normal in character. The other sister remained much in the same condition, so that there was no difficulty in distinguishing them. This case seems to afford conclusive evidence of the value of operating on these pulsatile forms without exophthalmos. That the good effects are attributable to the operation alone is shown by the persistence of symptoms in the twin sister.

FIG. 2

GROUP II.

Cases of Encapsuled Cysts, or Adenomata, usually Unilateral or Median.

CASE 7.—A young woman aged twenty-one was admitted to hospital on March 31st, 1890, with a small localised growth

at the junction of the left lobe and the isthmus. It had been growing for nine months and was causing her some pain and inconvenience. On April 1st the tumour was enucleated and proved to be partly solid and partly fluid—an adeno-cystoma. Four ligatures were used. Primary union resulted; she was up on the sixth and discharged on the nineteenth day.

CASE 8.—A woman aged thirty-four was admitted to hospital on Aug. 18th, 1890. There was a large swelling in the right lobe of from ten to eleven years' growth. It had increased rapidly of late. In the isthmus, to the left side, there was another, smaller swelling. For some time the patient had been unable to walk for more than ten minutes without resting in order to recover breath. There was some dysphagia. Through a median incision two adenomata were enucleated from the right lobe and a cyst from the isthmus. The largest measured two inches and a half in diameter. There was very little bleeding. The drainage-tube was removed on the second day and the sutures at the second dressing on the seventh day. She was up on the tenth day.

CASE 9.—The patient, a woman aged fifty, was admitted to hospital on May 19th, 1891. There was in the lower part of the right lobe a large localised mass, and another in the upper part of the left lobe. At first this appeared to be a case of bilateral goitre, but a closer examination showed that there was no general enlargement of the gland. On the right side the swelling was limited to the lower part, while above it the unenlarged lobe was to be felt. On the left side the lower part of the gland was felt to be normal in outline. Through a median incision both were enucleated from the thyroid gland, the bleeding being slight. Both were solid growths. Two drainage-tubes were used. The sutures were removed on the seventh day, and the patient was discharged on the eleventh.

As an example of a less favourable type of case the following may be cited:—

CASE 10.—A woman aged forty was admitted to hospital on May 13th, 1892, with a large tumour on the right lobe of eight years' duration. It had doubled its size in the last year. The tumour was enucleated on May 17th, 1892. It was embedded in the centre of the lobe, it being necessary to divide a layer of the gland in order to reach the capsule. This did not give rise to bleeding; but when the tumour, which proved to be solid, with a very thin friable capsule, was handled it broke up, and the bleeding was for a few moments severe. The mass was swiftly turned out and the cavity was plugged with a sponge. Many bleeding points required ligatures, a good many silk ones being used. The temperature rose in this case and continued to be high for a week, and there was free suppuration in the wound. There was still a sinus after six weeks, due no doubt to a silk suture. It was discovered that the patient's temperature had been high for two days previously to the operation.

Remarks.—These cases illustrate very well the varieties of bronchocele. In the first group the whole gland is involved, the vessels are enlarged, and the only way of dealing with the disease is to remove or dissect the lobes. I give my preference now to resection rather than to removal of the lobe. After tying the supplying vessels and ligaturing the lobe in masses the constricted portion may be safely cut away. The part attached to the trachea is left on each side. It is here that difficulty is experienced in dissecting away the gland and that the recurrent nerve may be injured. Cases 3 and 4 were brother and sister, and the form of bronchocele was identical in each. It was composed of many lobules, movable on one another to a slight extent, and there was no dyspnœa. In the boy it was feared that the whole gland had been removed, but fortunately a small nodule survived, and now carries on the function of the gland. The second group further illustrates a method of operating, described in recording eight similar cases in the Transactions of the Clinical Society, vol. xxiii. The tumour in these cases is nearly always unilateral or median. Of thirty-one cases submitted to operation, in only one was it bilateral—the case recorded above. The diagnosis is not difficult, for it is true to say that in all unilateral goitres the growth is encapsuled, and is either a cyst or a solid adenoma or a compound of these two conditions. The plan employed for these cases is to expose the thyroid gland through means of a median incision, however much to one side the tumour may lie. Then to search for the capsule of the growth. The purple-coloured gland is usually first seen, and sometimes, when old, the white cyst wall. If not, it must be searched for by raising the lower border of the gland, or dissecting up the upper border. In two instances a thin layer of the gland was divided without bleeding, for in these the growth was embedded in the thyroid gland. When once exposed the gland is dissected with ease. When the capsule is exposed and found to be white and resistent, then the swelling is certainly a cyst; when smooth and of a dark colour and thin, it is an adenoma. The thick-walled cyst, it is best to puncture, allow the contents to escape, and then dissect out. The solid growth must be rapidly turned out with the finger, for it bleeds a good deal. If a part of the wall of an adenoma or cysto-adenoma be left, it will bleed till all is removed. It is very striking to see the bleeding cease on removing a remnant of a capsule. In dealing with these cases, even where the growth is large, it may be necessary to ligature only one or two small vessels, this is particularly the case in the cystic variety. The vessels of the gland itself are not enlarged as in the parenchymatous form; so that even if the lobe be removed with the growth it will be found free from the dangers and difficulties attending thyroidectomy.

The operations were conducted with carbolic or sublimate irrigation, the wound was closed with a continuous silk suture and a large drainage-tube was inserted. The tube was removed on the following day, and the second dressing with removal of the sutures was made on the seventh or eighth day. The practice of fixing the neck between sandbags has been given up as unnecessary. It does not make any difference to the rapidity of healing whether the patient turns on to the side or not.

Weymouth-street, W.

CLINICAL REMARKS ON EXOPHTHALMIC GOITRE; WITH SPECIAL REFERENCE TO ITS POSSIBLE ETIOLOGY.

BY GEORGE F. JOHNSTON, M.B. EDIN.

SOME years ago Mr. Hutchinson, in an oration delivered before the Medical Society,[1] drew attention to the fact that "many of the diseases accounted rare are simply exaggerated specimens of what is common." In chlorosis a certain amount of enlargement of the thyroid body is often present, there is some protuberance of the eyeballs, and rapid pulse is an almost invariable accompaniment of the disease. Conditions in which these three symptoms are well marked would usually be included under the heading of "exophthalmic goitre." This can hardly be looked upon as a rare disease nowadays, for the increased attention which has of late years been directed towards it has shown that it is not by any means so uncommon as it was thought to be even at a comparatively recent date. If cases such as the two which follow are to be classed as examples of the disease, it must be regarded as of fairly frequent occurrence; but if profound alterations of nerve function, accompanied by marked changes in nutrition, constitute an essential part of the malady, then these cases do not deserve to be so classed.

CASE 1.—The patient was a well-developed, well-nourished girl, with every appearance of chlorosis and all its signs and symptoms, including constipation. The eyes were very prominent. Von Graefe's sign was present, but Stellwag's was absent. The thyroid gland was uniformly enlarged, the pulse-rate was 120, and she suffered much from palpitation. Menstruation had been absent for some months. There was very slight tremor of the hands when extended, which was not noticed by the patient herself.

CASE 2.—The patient, a young woman aged nineteen, complained of weakness, headache, incapacity for work, and palpitation. She had the appearance and all the signs and symptoms of chlorosis, including constipation, and occasional attacks of sickness. The eyes had recently become very prominent, but neither von Graefe's nor Stellwag's sign was present. The thyroid body was uniformly enlarged. The pulse was 110. Menstruation was present, but scanty. There was no tremor.

Both these cases improved rapidly under belladonna and the sulphates of iron and magnesia, not only as to the chlorosis, but as to the exophthalmos and goitre; and in a

[1] THE LANCET, May 18th, 1889.

few weeks they were almost well. The first patient was soon able to play several sets of tennis without undue fatigue.

In these cases there was no emaciation, and chlorotic symptoms were well marked; they thus afford examples of what may be called the chlorotic form of exophthalmic goitre, the characteristics of which are the presence of the symptoms of chlorosis and the maintained nutrition of the body, which may even be distinctly "plump." Every practitioner must be familiar with such cases, and I consider their distinction from those of the severe form of the disease as of great importance from a prognostic point of view, as although the exophthalmos and enlargement of the thyroid gland may be so great as to confer a startling and a startled appearance upon the patients, the cases nevertheless usually improve rapidly under treatment and are never so serious as those in which emaciation and multiple nervous symptoms are prominent features. Iron and aperients, which may do harm in the more serious cases, are essential adjuncts to the belladonna treatment; and as to these it appears probable that the view held by the late Dr. James Begbie[2] is correct—viz., that they are due entirely to the vitiated and impoverished state of the blood.

The next two cases so differ from the preceding ones as perhaps to justify the assumption that they differ from them in their cause as well as in their symptoms. Sir Andrew Clark[3] holds that chlorosis and anæmia in young girls are due to fæcal poisoning in many cases, and the above cases may also be due to that cause; but those which follow must have some causation much less frequent in its occurrence and more severe in its effects.

CASE 3.—A railway signalman aged forty-five complained of weakness so great that he could hardly walk, and of emaciation, palpitation of the heart, and great muscular tremor. Six years previously he had suffered exactly in the same way, but he completely recovered from that illness. He remained well for five years, when, during some intensely cold weather, he began to fail again, and the old symptoms returned in full force. When I saw him he was greatly emaciated, and there was very marked tremor affecting the whole body, but more so on the right side than on the left. The tremors were fairly rhythmical and very coarse, the contractions of the pectoral muscles being so powerful as to jerk the shoulders violently forward, so that at first sight his aspect almost suggested chorea. The movements were not increased by voluntary effort and continued during rest. They were made greater by excitement, and at this time he was quite unable to write. There was little or no movement of the head, and no nystagmus, and speech was unaffected. The temperature was 99° F. and, a few days later, 101°. The right lobe of the thyroid body was markedly enlarged. The pulse was 120; there were murmurs over the base and apex of the heart; and the cardiac impulse was widely diffused. There were great palpitation and dyspnœa. There was no exophthalmos, and von Graefe's sign was absent. At intervals he had irregular attacks of diarrhœa and vomiting. He complained much of heat, even in the coldest weather, and perspired profusely. The muscles were a good deal atrophied, especially on the right side. The urine contained a trace of sugar. Under treatment (rest, belladonna, and digitalis) the tremors lessened rapidly, and in three months he was able to return to his duties much improved in health. He now writes (twelve months after I first saw him) that he walks and sleeps well, is fairly strong, is still emaciated and has a little tremor, but can write nearly as well as he ever did. Subjoined are specimens of his handwriting. Fig. 1 illustrates it when the tremors had been much lessened by treatment, and Fig. 2 gives an extract from the letter just mentioned. Such very extreme tremor, amounting to clonic spasm, seems to be very little known and somewhat uncommon. Dr. Gowers[4] mentions it as occurring, but says it "must be regarded as a complication." Dr. Russell Reynolds,[5] on the other hand, states that "tremors and jactitation of the upper extremities are very common." Dr. Hector Mackenzie mentions tremors as an almost constant symptom and occasional violent attacks of trembling as frequent, but does not appear to have met with such a degree of continuous clonic spasm in his cases. The preponderance of tremors, wasting of muscles, and enlargement of the thyroid body all on the right side are also noteworthy.

CASE 4.—A young woman aged twenty complained of great weakness, emaciation, palpitation, and shortness of breath. A maternal aunt (middle-aged) suffered from exophthalmic goitre up to the time of her death, the disease apparently lasting for twelve years. The history of the onset of the disease is definite and interesting. It followed almost immediately upon the extraction of a tooth under nitrous oxide gas and had been preceded for a short time by neuralgia. For three days after the operation she was much upset, and on the fourth day she had a "hysterical attack," from which she dates her illness. She was much emaciated; exophthalmos was slight, but both von Graefe's and Stellwag's signs were present. The thyroid body was distinctly enlarged, particularly on the right side. The pulse rate was 160. Tremors were well marked, so as to make writing difficult. She complained much of flushing, heat, and profuse perspiration, which often burst out suddenly. She was particularly bright and cheerful, but was very easily startled. With belladonna and rest the tremors ceased, and the enlargement of the thyroid body and exophthalmos disappeared; but the rapidity of the pulse continued, emaciation increased, and, at last, she could not sit up in bed unsupported. Belladonna was discontinued and galvanism was used thrice daily as recommended by Mr. Cardew.[6] From that date she slowly and steadily improved, although on the cessation of the belladonna the exophthalmos and the goitre reappeared. The pulse still continued to be rapid, but she gained in weight and strength. Six weeks after commencing the galvanism she was able to go to the seaside, and I have since heard from her that she is slowly gaining strength and can walk for a quarter of an hour before beginning to feel tired.

FIG. 1.

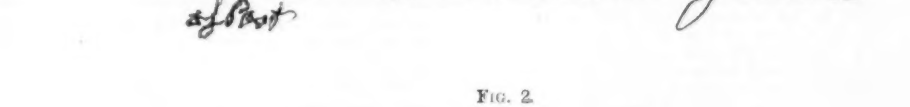
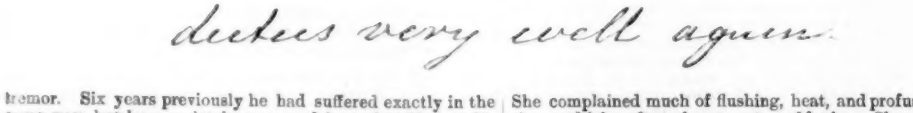


FIG. 2.



While it would appear to be impossible, as far as present knowledge goes, to account for such symptoms as are described in Cases 3 and 4 by any one lesion of the central nervous system, it is quite possible that they are caused by the circulation in the blood of some poison—a poison which seems to be, in some respects, allied in its action to a nitrite. In October of last year I was struck by the perfect contrast presented by some of the symptoms of exophthalmic goitre to those of myxœdema, and noted down the following: "There are indications which tend towards the belief that, as myxœdema is due to want of thyroid secretion in the system, so exophthalmic goitre is due to excess of it. It has been

[2] Contributions to Practical Medicine, p. 176.
[3] THE LANCET, Nov. 19th, 1887.
[4] Diseases of Nervous System, first edition, vol. ii., p. 814.
[5] THE LANCET, May 17th, 1890.
[6] THE LANCET, July 4th, 1891.

clearly proved that myxœdema is due to the loss of something from the economy generally which is normally supplied by the thyroid body and can be artificially introduced into the system in various ways so as to satisfy the necessities of the organism and remove the myxœdematous changes. Now, Dr. Hector Mackenzie and Dr. Fox[7] both found that an overdose of the thyroid gland administered by the mouth accelerated the pulse and caused profuse perspiration, as well as, in Dr. Fox's case, marked weakness and difficulty of standing or walking. These are all symptoms of exophthalmic goitre, and the patients were myxœdematous. To contrast a few of the symptoms:—

Exophthalmic Goitre.	Myxœdema.
1. *Thyroid gland* usually enlarged.	1. Absent or atrophied.
2. *Skin.*—Profuse perspiration; electrical resistance diminished.	2. No perspiration; electrical resistance increased.
3. *Subcutaneous tissue.*—Extreme emaciation in many cases.	3. Large deposit of fat.
4. *Temperature* irregular; frequently raised; feeling of warmth.	4. Temperature lowered; feeling of chilliness.
5 *Pulse* very rapid.	5. Often very slow.
6 *Mental change.*—Irritability and excitability.	6. Hebetude and placidity.
7. Often amenorrhœa.	7. Often menorrhagia.

I have only taken the symptoms which are most frequent in the two diseases, but the contrast might be carried still further. I do not lay much stress upon the electrical resistance of the skin. Mr. Cardew[8] has shown that it is merely a question of dryness and moisture. As to the fact that the thyroid body is not always enlarged, that can be answered by the equally true one that it is not necessary for a gland to be enlarged in order to be functionally over-active, and I think it quite possible that the enlargement is due to two causes: (1) to the over-activity itself, and (2) to the effect upon the circulation of the excessive secretion. The long duration of the disease may be brought forward as an objection to this theory; but there is a somewhat analogous case in such rare instances of ptyalism as that mentioned by Sir Thomas Watson,[9] in which the salivary glands secreted nine pints a day for nine years and a half. It is interesting to note in this connexion that, in the series of cases of myxœdema collected by the committee of the Clinical Society,[10] there were several in which the myxœdema had been preceded by Graves' disease. Does not this look as if the gland might have been at fault in the first place, and subsequently atrophied, the commencement of atrophy being associated with diminution of secretion and consequent recovery from the exophthalmic goitre? Again, the drugs which have empirically been found to have the most effect upon Graves' disease are belladonna, digitalis, and ergot—all three causing contraction of the peripheral arterioles, and thus possibly allowing less blood to pass through the gland; and belladonna, which is the most serviceable, may directly check the secretion as it does with so many other glands. Electricity may act in the same way. Excision of the gland has arrested the disease in some cases; but I am aware that these are regarded as doubtful cases of the disease. Ice to the gland has also been found to be beneficial, possibly by checking its secretion. Filehne's result from division of the anterior fourth of the restiform bodies proves no more in the case of exophthalmic goitre than the production of glycosuria by puncture of the floor of the fourth ventricle does in the case of diabetes. Dr. Fagge[11] dismisses the thyroid body from consideration as the main factor in causing the disease, because he merely considered the mechanical effects of its pressure."

After writing the above I found that Möbius[12] in 1887 and Dr. Byrom Bramwell[13] had already suggested over-activity of the gland as a possible cause of the disease, the latter's arguments being very much the same as those used above. In April last Mr. H. Williams[14] also suggested the same theory. Doubtless the idea has occurred to many more. Changes which have been found in the thyroid body in fatal cases give some support to this view. The absence of colloid material may be accounted for by its being produced so rapidly and absorbed so quickly as not to be stored up in the vesicles. The glandular hyperplasia points to an over-activity of the secreting structure. It is quite easy to see how atrophy of the gland and myxœdema might have resulted, had the patient survived, from such a condition as that described by Dr. Grainger Stewart and Dr. Gibson.[15] One would expect that, as the thyroid extract can be introduced into the system with good effect in myxœdema, so an excess of it could be produced in a healthy individual by thyroid feeding, the truth or error of the above views being in this way conclusively established. But it would appear that myxœdematous patients are peculiarly sensitive to the action of the secretion and that some of the symptoms of exophthalmic goitre can be produced in them by a dose of thyroid which has no effect upon a healthy person. It is also true that thyroid extract has been administered to patients with Graves' disease without increasing their symptoms[16]; but we have no means of knowing whether the secretion of the gland may not be so enormously increased that a little more or a little less would not make any particular difference. This is at all events possible. Dr. Anson[17] states that thyroid extract has no effect on the healthy. Mr. Beadles[18] states that in the healthy adult its administration is followed by "headache, sleeplessness, and increase of pulse-rate." I can always, and have repeatedly done so at intervals, raise my pulse from its normal rate of about 70 to 120, or even higher, by taking, for a day or two, two or three tabloids twice or thrice daily. A dose of one tabloid appeared to have no effect. This acceleration of pulse-rate is accompanied by palpitation, flushing, fulness in the head, slight tremors, and a very unpleasant feeling of heat, both subjective and objective, with profuse perspiration, even in cold weather. Up to the present, however, this theory of the over-activity of the thyroid body as the cause of exophthalmic goitre can only be looked upon as a theory. The individual himself and his neurotic temperament must still be regarded as predisposing causes; for it is well known that the disease frequently attacks several members of the same family, and in other cases members of the same family are the subjects of various neuroses.

Manchester-square, W.

7 Brit. Med. Jour., Oct. 29th, 1892.
8 THE LANCET, Feb. 28th, 1891.
9 Lectures, third edition, vol. i., p. 799.
10 Clinical Society's Transactions, vol. xxi., Supplement, p. 180.
11 Medicine, first edition, vol. ii., p. 89.
12 Quoted by Dr. Hector Mackenzie, THE LANCET, Sept. 20th, 1890.
13 In 1891: Atlas of Clinical Medicine, vol. i., part i.
14 Brit. Med. Jour., vol. i. 1893, p. 790.
15 Ibid., vol. ii. 1893, p. 677.
16 Dr. Hector Mackenzie in THE LANCET of Jan. 21st, 1893.
17 New Zealand Medical Journal, July quarter, 1893. Quoted in THE LANCET of Sept. 23rd, 1893.
18 THE LANCET, Sept. 30th, 1893.

ROUGH NOTES ON REMEDIES.

(Continued from THE LANCET *of Feb. 25th, 1893.)*

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No. II.

On Belladonna.

THERE are few remedies which determine the existence of idiosyncrasies in patients more frequently than belladonna. Just as opium, iron, the iodides, mercury, arsenic, or alcohol require a knowledge of the patients' susceptibility before they can be prescribed with certainty, so belladonna demands a like knowledge, and it must be prescribed with caution until it is known whether any special idiosyncrasy with regard to it exists; otherwise one may find the patient covered with an eczematous rash in twenty-four hours; or a most distressing state of the nervous system, accompanied by disturbance of vision and a most unpleasant dryness of the throat and nose, may be met with. So susceptible are some that the mere application of a small belladonna plaster will produce all the above effects with great violence.[1] On the

1 I may here remark that special caution ought to be observed in ordering or applying a belladonna plaster of large size. Anything over six, or even five, inches square is almost sure to produce some systemic effects, such as slight giddiness and uncertainty of gait and vision; and later, when the plaster produces pustular irritation, a fresh absorption of belladonna sometimes takes place, with a more decided occurrence of the above symptoms, and such effects are much intensified if the plaster is applied over a surface which has been already irritated.

other hand, one meets with cases where very large doses of reliable preparations can be taken with impunity, and this without the patients having become accustomed to the drug. I remember a case where eight grains of the extract were taken in mistake without much effect on the patient. It seems as if patients do not become accustomed to belladonna as they do to opium; it affects them as decidedly at the end of three months' use of it as it does at the outset. If the patient will bear a large dose he will bear it when he begins to take it as well as when he has taken it for a month; and, further, the same results are obtained after it has been given for a long time as at the outset of the treatment. I am a little uncertain as to its cumulative effects, but my experience goes to show that one can set up a certain amount of atropism by certain doses, and that this condition can be maintained indefinitely without much variation of dose, so that I infer that it neither accumulates nor loses its effects, although, of course, frequently repeated doses not only keep up but intensify its action; for instance, half a grain of the extract given every night will produce slight dryness of the throat and uncertainty of vision and go no further, while half a grain every four hours will produce delirium in two or three days.

The action of belladonna has been intimately observed by the strictest scientific methods, but I do not propose to refer to these studies in physiological therapeutics; my object is to draw attention to some points in its action which a prolonged observation in ordinary physicians' work has revealed to me. I refer to its action in the following conditions: (1) in the removal of renal calculi during attacks of renal colic; (2) in dysmenorrhœa; (3) in painful defecation depending on (*a*) displaced and enlarged ovaries, (*b*) retroflexion of the uterus, and (*c*) pelvic exudations and adhesions; (4) in obstruction of the bowels; and (5) in typhlitis.

1. *Renal colic.*—I have already published accounts of several cases where large or toxic doses of belladonna given during an attack of renal colic have been followed by the discharge of the calculus per urethram. My success has been confirmed by the experience of others, notably of Dr. Jennings of Jarrow, who informs me that he has twice succeeded in bringing away the calculus by my method. I must again insist on two points: firstly, the drug must be pushed until slight delirium supervenes—that is, by giving thirty or forty drops of reliable tincture every two or three hours; secondly, it must be given during an attack of colic. It is of no use except the colic be present. It may relieve the ordinary wearing pain of stone in the kidney, but it will not move the stone except the patient is in the throes of an attack of renal colic. When once this occurs he ought to be prepared with the necessary doses and begin immediately, even before sending for his medical attendant. In such cases careful instructions ought previously to be given to the patient. I cannot say that anything in my experience has given me more pleasure than finding the calculus awaiting me after a few hours of this treatment by toxic doses of belladonna.

2. *Dysmenorrhœa.*—Let it be admitted that dysmenorrhœa is due to spasm, or to mechanical obstruction *plus* spasm, or *plus* neuralgia, or *plus* inflammatory or congestive action in or connected with the uterus, and there is a large field for the action of belladonna. A patient well under the influence of the drug is not likely to suffer much from spasm, so that the spasmodic element can be eliminated in a case by a full dose or two of belladonna. If after these doses pain still continues there are no doubt other elements in the case—mechanical, congestive, or inflammatory. The neuralgic element is also to a great extent eliminated by belladonna, so that one can get rid of these two causal elements by means of this remedy, and thus the diagnosis is simplified. By far the best method of administering the drug for pelvic pain is the use of the suppository of one grain of the extract repeated every two or four hours. The suppository should be used as soon as the first sign of pain indicates the molimen, and although it is a somewhat disagreeable mode of administration I think the general use of belladonna suppositories for this ailment ought to be advocated, and many sufferers from even slight dysmenorrhœa ought to be provided with this remedy and instructed in the use of it. Full many a tale of woe begins in neglected dysmenorrhœa; spasm leads to congestion, congestion leads to weight of fundus, weight of fundus to flexion, and these to endless miseries. How important, then, to arrest the progress of events at the outset, when there exists such a simple remedy at hand. Every girl of a certain age who thus suffers, every nurse, and every woman *in loco parentis* ought to be aware of this means of relief and ought to have the remedy at hand.

3. *Painful defecation, &c.*—With regard to the use of belladonna in those cases where there is spasm *plus* some more organic condition, such as exudation in the pelvic cellular tissue, adherent or displaced ovary, and short lateral ligaments causing fixation of the uterus, I have this to say, that it is a most material aid to other remedies, such as mercury or iodide of potassium. In the case of mercury the best plan is to combine it with belladonna in a suppository such as the following, for continuous use until a perceptible effect on thickened tissues or adherent organs is produced: Mercurial ointment, 2 grains; extract of belladonna, 1 grain; oxide of bismuth, 3 grains (to prevent local irritation); and oil of theobroma, as much as is sufficient; to be inserted twice a day. In this way one secures relief of pelvic pain, and, if there is painful defecation, the relief of that too; for there is no remedy which brings about such a comfortable action of the bowels as belladonna. For this latter purpose it may be added to a glycerine suppository, which secures a free as well as an easy movement of the bowels.

4. *Obstruction of the bowels.*—This leads me to the effect (sometimes wonderful) of belladonna in cases of obstruction of the bowels. I shall record one or two cases, so that its *modus operandi* may be discussed, as I think that they throw some light on the subject. The question to be decided in the use of belladonna for obstruction in the bowels, or ureters, or uterus, is this: is the relief due to relaxation of circular fibres, or is there also a peristalsis set up by it? Let the following case speak for itself. A few years ago the captain of a ship arrived in South Shields far advanced in strangulated hernia. The late Dr. Heath operated on him, with relief of the symptoms of strangulation, but the patient remained without any action of the bowels for ten days after the operation, when the stercoraceous vomiting and other symptoms of obstruction set in. When I saw the patient the abdomen was immensely distended, the skin shining from tightness and reddened by turpentine and other applications. The pulse was like a thread, the countenance was anxious, and there were great exhaustion and almost constant vomiting. Taking advantage of the almost excoriated abdominal surface, I applied a piece of lint, 20 in. by 20 in., spread with extract of belladonna slightly attenuated with vaseline. In three hours the most decided atropism was developed, and that same evening a copious and continuous action of the bowels took place, with relief of every symptom. Did this relief come from relaxation of some tightly contracted portion of gut? Or was there added to this a setting up of very active peristalsis? Or is it possible that there was no spasm at all, but simply an exhausted passive state of the bowel which was removed by the peristaltic effect of the belladonna? At any rate I think one may infer from the very severe action which took place that something more than relaxation of fibres was produced and that the intestines were roused from their dormant inactivity into violent action by the drug. Against this view there have been seen cases where belladonna has failed to cause an action of the bowels until an enema came to its aid and where most remarkable effects have been produced in apparently hopeless cases of obstruction by the administration of an ox-gall enema. Let it be noted, however, that I have seen the ox-gall, the most powerful of all enemata, fail until atropism was set up in association with it; to obtain the best results, therefore, in these cases one ought to induce full atropism and then give the enema. An additional argument in favour of the propulsive action of belladonna is to be found in those cases of renal colic to which I have referred, where toxic doses of belladonna send the stone down the ureter into the bladder and then out of the bladder per urethram.

5. *Typhlitis.*—A question which often presents itself at the bedside is this: Shall I give a purgative—say, castor oil guarded by opium—or shall I rely on belladonna? This question will be best considered in connexion with the treatment of typhlitis. Experience derived from a large number of cases of typhlitis has taught me this—that after the acute stage, when the patient has been properly treated by opium, and when one has probably to deal with a large effusion and an impacted bowel, belladonna becomes the most valuable and the only safe remedy. At this stage, I repeat, there is generally a locked-up state of the bowels, partly due to opium and partly to the inflammatory effusion, and woe betide the practitioner *and the patient* if an attempt is made to move the bowels by any kind of purgative. The best plan of treatment for these conditions is this: firstly, to apply an ointment consisting of extract of belladonna, one drachm, and iodine ointment, one ounce, on a pledget of lint 4 in. by 8 in.,

over the seat of effusion; and, secondly, to administer a grain of extract of belladonna as a suppository every six or eight hours until atropism is set up, and then to administer an enema of warm olive oil, and, if that fails, an enema of ox-gall and soap with a crystal of washing soda added. In this way one attacks the effusion by iodine, soothes the parts and relaxes spasm by belladonna, and prepares the way for an easy action of the bowels without the risk of setting up fresh typhlitic irritation. With reference to the ointment of iodine and belladonna it proved of immense value to me in cases of pelvic exudation and enlarged ovary, as also in subacute pelvic cellulitis. It is likewise very useful in rheumatic joints and in all kindred affections. Of course, there is nothing new in the application of either iodine or belladonna in this way; but my points are: firstly, the combination and, secondly, its continuous application. As soon as the iodine begins to irritate, the belladonna is more rapidly absorbed and its action is thus intensified, and there is obtained the combination of a counter-irritant, an absorbent, and a sedative.

Newcastle-on-Tyne.

SOME CASES OF

NEURALGIA AND MIGRAINE TREATED BY THE USE OF THE PERCUTEUR.

BY RICHARD NEALE, M.D. LOND.,
AND
JAMES BAYS, M.D. LOND.

THE following account of several cases of neuralgia which have been treated by means of the percuteur will be of interest, as they were of a most intractable nature and all the usual remedies had been unavailingly employed. The three cases of neuralgia were of a very severe character, and all the numerous remedies recommended in the text-books had been tried in each one, through many years, without any material alleviation of the suffering of the patient. In one case so great and persistent had been the agony that the operation of the removal of the Casserian ganglion was about to be performed. It may, perhaps, not be out of place to explain briefly the action of the percuteur here. By means of a small machine worked by a battery a slender metal rod, on one end of which discs of various size may be placed, is made to vibrate upwards and downwards at the rate of about 120 strokes per second, the disc being placed over the affected nerve. The repeated tappings upon the surface quickly cause the capillaries and small bloodvessels to dilate, and an increased amount of blood in the part is the result, thus improving the nutrition of the nerve by increasing the blood-supply; it is, in reality, a form of nerve massage. In addition to this, Dr. Mortimer Granville has suggested that the pain of neuralgia is due to vibrations of a certain number and intensity in the nerves, and that the percuteur relieves the pain by altering the rate of the vibrations.

CASE 1.—A middle-aged man (sent to us by Dr. Sidney Phillips) had suffered from acute facial neuralgia for more than twenty years. He stated that the treatment he had undergone had been of no avail during the many years he had suffered, and that the slightest cause brought on an attack of excruciating pain. This was particularly the case as regarded draughts, the hot air of a crowded building or fatigue, life being so unendurable that he had often felt inclined to end it. He had not the slightest hope of being relieved by any means whatever, but as Dr. Phillips had suggested the use of the percuteur he was willing to try it. After the first application of the percuteur over the left temporal region for half an hour he expressed himself as being quite relieved. He was told not to be too sanguine as to the result of the first application, but that it was probable that a dozen applications would effect a successful result. After this number of applications he was quite free from the neuralgia, and in a letter written some time afterwards he stated that he had borne the changes of the Indian climate without a return of his trouble.

CASE 2.—A man was attacked by neuralgia in the winter of 1873–74 when at Torquay, the first symptoms being a few sharp pricks in the right eyelid. This passed off, but returned in two or three months. In the summer of 1875 the patient had very severe attacks, in which there was sharp pain in the eyelid; in his own words, "the eye burning as if a hot poker had been thrust in." Each attack lasted for from forty to fifty seconds. He was given quinine, but this only made his condition worse. After this he was treated with croton-chloral, gelseminum, and phosphorus, and with outward applications of chloroform, aconite, and oil of mustard. From this time to 1880 he described his condition as being "better and worse," the pains at times leaving him, but returning in a short time as severely as ever; they were very sharp when at their height, the eyes streaming, and the pain extending over the brow. These symptoms could always be brought on by a touch, by blowing the nose or moving the upper lip, or by eating. After an attack of pain the hyperæsthesia generally passed off. In October, 1880, the patient was treated with strychnia, chloride of ammonium, pepsine, nux vomica, and various preparations of iron, and he was ordered to take stimulants. These remedies gave only temporary relief. The teeth underwent treatment by a dentist, but without any alleviation of the symptoms. The patient was then under the care of three ophthalmic surgeons successively, whose treatment was without effect. In December, 1888, his condition was very bad, the top of the head had become very sensitive, and pain was brought on by brushing the hair or by cleaning the teeth. The upper part of the lip was the most sensitive part; it had become so extremely painful that he had to eat minced foods only and to take liquids through a glass tube. In 1889 he was under the care of a homœopath and had electric baths and took exercises on a wooden horse. The pain had never quite disappeared, but at times was somewhat diminished. He then had all his teeth extracted and tried hypnotism without any result. Ammonia, bark, arsenic and tonga were given, and in October he lost the pain entirely for a few days; but it returned again, and in November the patient was very bad. The pain had increased so much in intensity that he described it as a constantly recurring torture coming on in paroxysms every fifteen minutes, and on one day even every five minutes. On Dec. 3rd, 1890, when seen about 7 P.M., he was in an exhausted condition, having suffered from repeated attacks of agonising pain during the whole of that day and many days previously. The chief seat of the pain was at the back of the right eye and over the supra-orbital branch of the fifth nerve. The slightest touch upon the upper lip immediately excited a paroxysm. In addition to all the known drugs which had been tried section of the nerve had been recommended. Thinking it to be a case where a good result was likely to follow the use of the percuteur it was applied for half an hour over various painful spots, especially on the right side of the face, upon the upper lip, the supra-orbital notch and infra-orbital foramen, the malar bone and external angle of the frontal bone, and also upon one or two very tender spots upon the scalp. Great pain was excited at first by the action of the percuteur; but very soon ease was secured, and before the end of the *séance* the disc was passed over the spinous processes of the fourth and fifth dorsal vertebræ. This treatment was repeated for ten consecutive days, at the end of which time the pains had almost ceased, but were still capable of being brought on by pressure over the lip, by combing the hair, or even by touching the malar bone and external angle of the frontal bone. After an interval of four days the patient returned, having had only a slight indication of pain, which the percuteur relieved. After an interval of eleven days he had another application. He was able soon afterwards to perform all his duties. He still has at intervals some return of his old trouble, and he has recently had a rather severe attack following influenza, but this was again relieved by the percuteur. The case has been a most obstinate one, and, though the treatment has never failed to relieve him and enable him to lead a comfortable life, he cannot at present be said to be cured.

CASE 3.—A woman sixty years of age had suffered from neuralgia for five years, affecting the right side of the face, chiefly the lower jaw; she had had several teeth removed, but without any advantage. Three years ago Mr. Silcock, to whom we are indebted for permission to publish the case, removed a portion of nerve in the lower jaw. She obtained ease from this for three or four months, when the pain returned, and it had gradually become worse since. Medicinal treatment had never seemed to influence it. The patient had the appearance of a woman in continual pain, and stated that she seldom had more than five minutes' relief. She was unable to eat properly, as food in the mouth considerably increased the distress. The greatest pain was felt at the dental foramen on the right side; there was also considerable pain at the supra-orbital notch and the infra-orbital

foramen. Cold caused an increase in the pain, but warmth somewhat relieved it. She had had about six acute paroxysms of pain a day during the previous month. On Aug. 11th of this year the percuteur was applied over the three above-mentioned spots for half an hour. The pain at first was very intense, but after the application of the percuteur she said that the pain was much relieved, and that it had almost disappeared. On the following day she suffered somewhat severely from the neuralgia, which interfered with her sleep. She had considerable pain at the commencement of the application of the percuteur, but none at the end of half an hour. On the next day she stated that she had had two bad attacks on the preceding evening. After the application of the percuteur the pain disappeared. From this time the attacks of pain during the intervals of treatment were very slight, and although pain was brought on when the percuteur was first applied it disappeared after a short time. After the sixth application the patient was told to come every other day for treatment. She was then able to eat meat, which previously she had been unable to do unless it was in a minced state. After the ninth application she expressed herself as not having been so comfortable for years. Twelve applications in all were given, and the patient was then told to return if she had any further trouble. She soon afterwards went to a convalescent home, and has not returned for any further treatment.

Although the percuteur is of most service in neuralgia it is also useful in the relief and even cure of migraine, as the following brief notes will show.

CASE 4.—A girl aged seventeen years had for three years suffered almost continuously from migraine. Previously to this time, and as long as she could remember, the headaches had been very frequent, and their severity had been much increased by fatigue and over-exertion. On coming under treatment she was found to be a bright-looking girl, but somewhat badly nourished. She was ordered to take three pints of milk a day, and the percuteur was applied to the head. This was done on eight occasions, thirty minutes being allowed for each application. The headaches from the first diminished in number and severity, and, writing three months after the last application, the patient said: "I am wonderfully better, and have had hardly any headaches these last two months."

In a case of tinnitus aurium and nervous deafness which had lasted for four years, and in which a great variety of treatment had been tried without any benefit, after twelve applications the patient stated that the noise was much less distressing in the ears, and that the headaches and depression from which she suffered were very much better. In neurasthenia the percuteur, when applied along the spine, has proved to be of great service in curing the feeling of intense weariness and in removing the pain in the back, and it is also useful in the relief of sciatica. In cases of premature alopecia in which the usual stimulating lotions have done no good a plentiful growth of hair has resulted after a few applications of the percuteur to the scalp.

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A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

A CASE OF DERMOID CYST OF THE SPERMATIC CORD SIMULATING HERNIA; OPERATION; RECOVERY.

(Under the care of Mr. A. PEARCE GOULD.)

THE rarity of the following case, and the error in diagnosis caused for a long time by its having been mistaken for hernia, render it of much interest. It resembled very greatly in some of its characters one form of hydrocele of the cord, a condition which is not infrequently mistaken for a rupture. We refer our readers to Mr. Pearce Gould's remarks appended to the case.

A man thirty-four years of age was admitted into Pepys Ward, Middlesex Hospital, under the care of Mr. Gould. The patient stated that fourteen years ago he had stepped off a ladder on to the ground with a considerable shock, having thought there was one step more. The following morning a swelling about the size of a walnut was felt in his left groin. He was told that he had a rupture and was supplied with a truss, which he wore continuously and without suffering any inconvenience from the supposed rupture. In December, 1892, he slipped off the kerbstone on to his left foot, and immediately afterwards he experienced pain in the left groin, and the truss appeared not to fit and to be a source of pain. He then tried various trusses, rested in bed for a time, and applied hot fomentations to the groin; but as all these means failed to relieve his pain he sought admission to the hospital.

The man was strongly built, dark, well-nourished, with a healthy appearance. On examining the left groin a tumour was found occupying the inguinal canal and just reaching into the scrotum. It lay behind the spermatic cord, which was spread out over it, and it projected to the outer side of the cord. It was an elongated oval in shape, smooth, tense, and fluctuating. It was quite irreducible; coughing produced a distinct impulse in it. There was no hernia to be felt. The testicle was normal. In all other respects the man was in perfect health. On March 8th, under anæsthesia, an incision was made over the tumour on the outer side of the spermatic cord, and continued down through the various coverings of the cord. An opaque white cyst wall was then exposed, and this was carefully freed from its bed and removed. The inguinal canal was found to have been considerably distended by the tumour, which lay just outside the peritoneum. The wound was irrigated with corrosive sublimate solution, dried, and the skin sutured with silk; the inguinal canal was not closed artificially. An antiseptic dressing was applied. The patient's convalescence was uneventful. On March 13th the dressings were removed, and a collodion dressing applied. On March 17th the sutures were removed and the collodion reapplied; primary union was complete. On March 18th he left the hospital under a promise to rest at home for a further ten days. The tumour was the size of a large hen's egg, and consisted of a thin, smooth wall filled with sebaceous matter and a few dark hairs. It was adherent to the cord at its lower end. The man returned to the hospital to show himself in May, the scar was sound, and there was no bulging at the inguinal canal.

Remarks by Mr. PEARCE GOULD.—This case has features of interest, both pathological and clinical. Dermoid cysts in the inguinal canal are "excessively rare" (Sutton), and no mention of them is made in surgical text-books, not even in such a complete monograph as Mr. Jacobson's recently published work on "Diseases of the Male Organs of Generation." The cyst was not lying loose in the canal, but it was attached at its lower end to the spermatic cord, and it is therefore more accurate to speak of it as a cyst of the cord. From this attachment it seems clear that it was drawn down from the abdomen in the descent of the testicle, and its distinctly retro-peritoneal position is in harmony with this view. If so, the question naturally arises whether it does not throw some light upon the origin of the rare instances of dermoid cysts of the testicle. They have been regarded as the result of abnormal development of the germinal epithelium, or as developed from portions of epiblast included in the testicle in an early stage of its formation. The former view would not apply to a dermoid cyst of the cord, but such a case as this lends weight to the latter view, and it seems reasonable to suppose that dermoid cysts of the cord and, at any rate, some dermoid cysts of the testicle, have the same origin, their final situation depending upon a very slight difference in their original position and adhesion. It is not difficult to account for the origin of such cysts: the Wolffian duct, which subsequently develops into the lower part of the epididymis and the vas deferens, is probably formed from the epiblast, although some observers have described it as formed in the mesoblast in close connexion with the epiblast. Kollmann states definitely that it is an epiblastic structure, and his view is supported by Milnes Marshall; it is described as originating in a longitudinal groove in the epiblast with thickened walls, the edges of this groove coalesce, and the tube sinks in—just the process liable to give rise to a dermoid cyst. The clinical interest in the case is twofold. First, its resemblance to a hernia. This consisted not only in its situation, but in the history of its first appearance directly after a strain, and its increased size and painfulness after a

further strain. It was thought also to be reducible. When I saw it, it was clearly not reducible into the abdomen, although the lower part of the swelling could be pushed within the inguinal canal; and its relation to the cord clearly indicated that it was not a hernia. The second clinical feature on which I would comment is the fact that removal of the tumour left a widely distended inguinal canal, and although no special means of closing it were taken there was apparently no tendency to the formation of a hernia. This is probably due to two factors at least—the preservation of the obliquity of the canal, and the fact that the cyst had not impaired the integrity of any of the structures bounding the canal—they were stretched, not torn or displaced—and when the stretching force was removed they quickly contracted to their normal proportions with unimpaired strength.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

EXTENSIVE BURN; HÆMATEMESIS; DEATH; NECROPSY.

(Under the care of Mr. SWAIN.)

HÆMORRHAGE from the gastro-intestinal tract does not appear to be a common cause of death after burns. Of sixty-eight fatal cases collected by Mr. Erichsen only two died as the result of hæmorrhage from duodenal ulcers, and cases such as the following must be rare. It is of course acknowledged, and has been frequently proved, that although many patients suffering from burns have definite ulceration in the duodenum, there are no symptoms on which we can rely to prove their presence during life, unless they cause hæmorrhage or perforate the bowel. Hæmorrhagic lesions of the mucous membrane of the intestine and perforating duodenal ulcers have been frequently observed by Rokitansky. Duodenal ulceration may prove fatal at any time from the fourth to the sixtieth day. For this report we are indebted to Mr. R. Stanley Thomas, house surgeon.

A young woman aged nineteen, when lighting the kitchen fire on Aug. 31st last, caught her dress in the flame and was severely burnt. She was treated at home for five days, being admitted into the hospital on Sept. 5th. There were extensive burns of the back, buttocks, and backs of the thighs and legs, ranging from the second to the fourth degree. The wounds were very sloughy. The temperature was 103·6° F.; the pulse was 160. The wounds were dressed with zinc and eucalyptus ointment; she was given milk, brandy, and opium, and was bathed every day for an hour in a very weak disinfectant fluid. On Sept. 14th the baths were stopped, as they exhausted her a great deal and because the sloughs had nearly all separated. On the 15th the temperature fell to 100°. She seemed much better and the wounds were becoming very clean. On the 16th, at 11 A.M., she vomited after food and complained of slight pain in the epigastrium; at 3 P.M. she was vomiting constantly. The vomited matter had a coffee-ground appearance characteristic of the presence of blood in it. She was fed by nutrient enemata and given ice to suck. On the 17th she was vomiting constantly and was very collapsed, but was quite conscious until 3·45 A.M., when death occurred.

The necropsy was made thirty-six hours after death. Post mortem rigidity was marked. On opening the peritoneal cavity the intestines were found to be distended. There was no fluid in the peritoneal cavity and no peritonitis. The small intestines were examined, but no ulceration or congestion of the duodenum was found. The stomach was distended and contained coffee-ground looking material. At the cardiac end there was extensive surgical emphysema. No ulceration was perceptible to the naked eye. Several vessels were much congested. The rest of the mucous membrane was healthy and the peritoneal surface was smooth.

Remarks by Mr. THOMAS.—The sudden hæmatemesis, followed by severe and fatal collapse, points to hæmorrhage from the stomach. It is probable that some minute ulceration must have taken place in the mucous coat, which produced the fatal hæmorrhage, and that the retching caused the emphysema, which was limited to the cardiac end of the stomach. There was no sign of emphysema elsewhere, and decomposition was certainly slow considering the season of the year.

KASHMIR MISSION HOSPITAL.

EXCISION OF GUMMATA OF THE TESTICLE; RECOVERY.—STRANGULATED HERNIA; INJURY TO THE BOWEL; OPERATION; RECOVERY.

(Under the care of Mr. ARTHUR NEVE.)

GUMMATA of the testis are generally so amenable to ordinary treatment that we seldom see such on the operating table for the purpose of exploratory incision. It is probable that the conditions under which medical treatment at the Kashmir Hospital is carried out are such as to make it impossible to put the patient under a course of treatment sufficiently extended to enable the surgeon to draw conclusions. The result of removal was to considerably shorten the after-treatment, which would have been usually resorted to when the diagnosis was confirmed at the operation, and it is interesting to observe how easily the gummata were removed. It is apparent from the record of the second case that considerable violence had been inflicted in the attempts to reduce the hernia, which affords another illustration of the statement that no two hernias are alike. The sac gave evidence of this by its inflamed state, and the intestine must have been severely bruised. There can be little doubt of the importance of the part played by the drainage tube in averting a fatal result.

CASE 1.—A Kashmiri thirty-five years of age was admitted to hospital suffering from a gumma of the right testicle of six months' duration. The organ was of the size of an orange. On Aug. 14th, under chloroform, an incision was made into the organ to confirm the diagnosis, with a view to removal if necessary. Hydrocele fluid escaped, and a gumma of the size of a pigeon's egg appeared. The whole testicle was laid open by a free incision, and the gumma was easily dissected out. By palpation another smaller one was discovered and removed. The testicle, which had been drawn entirely outside the scrotal incision, was now replaced. Iodoform was dusted into the wound, which was closed by suturing with catgut the edge of the testicle to the edge of the scrotum all round, so as to prevent hæmatocele, and then closing the scrotal wound with the same continuous catgut suture. The zinco-cyanide gauze dressings were strapped firmly on.

Aug. 21st.—There has been absolutely no pain. The wound was dressed six times; at first a little reddish gelatinous discharge was found.

On Aug. 31st the patient was dismissed cured.

CASE 2.—A patient fifty years of age came under treatment for a strangulated hernia of three days' standing. Forcible attempts at reduction had been made by himself and others. He had suffered from constipation and vomiting. The abdomen was tense. The hernia was of the size of a duck's egg, being hard and tender. On Aug. 15th, under chloroform, the mass was incised. The parts were matted together and œdematous. A very thick sac was found, with blebs of serous fluid, but no bowel. On exploring towards the abdomen some reddish-brown fluid escaped, indicating an injury to the bowel. The inflamed sac was excised; a large drainage-tube was passed into the abdominal cavity and the rest of the wound was sutured. He was removed to his home. Two ounces of castor-oil were ordered to be administered. After midnight the pain was relieved; there was no more sickness, and the bowels acted. On Aug. 19th he began to take liquid food better; there were a few drachms of offensive discharge.

Aug. 25th.—There is little discharge; he takes solid food.

A week later he walked into the consulting-room quite briskly, and was allowed to go to his village, taking a little ointment for the almost dry sinus.

Remarks by Mr. NEVE.—As regards the first case there appears to be room for more conservative surgery in relation to the testicles, which are often removed for simple neoplasms. Perhaps similar operations to that above recorded may be familiar to some surgeons. This is the first operation of the kind I have performed, and it would be interesting if those who have practised such an operation would record their experiences. In the second case the tumour felt like a strangulated omental hernia owing to the lumpy thickening of the sac. The prognosis seemed to be bad. Probably the drainage averted a fatal peritonitis.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Some Mental Disorders associated with the Menopause.

AN ordinary meeting of this Society was held on Oct. 30th, Dr. BRISTOWE, President, in the chair.

Dr. G. H. SAVAGE read a paper on Some Mental Disorders associated with the Menopause. He said that, notwithstanding the frequency of such disorders, very little had been written on the subject. Many mental disorders occurred at the climacteric period which could not be traced to that as a simple cause, though in many cases the climacteric was a predisposing cause. No special form of insanity could be called climacteric. As a rule, there was a tendency to mental depression rather than to excitement in these cases. Any of the symptoms of the menopause might be so exaggerated as to assume serious mental aspects. There might be a kind of climacteric hypochondriasis, which might show itself in complaints referred to the circulation, to the head, to the skin, or to the viscera. The unnatural feelings in the skin or about the body might lead to the tendency to make false accusations. The development of hair on the face might lead to miserable feelings of being unnatural or unwomanly. Deafness might arise during the climacteric and might lead to various delusions, especially of a suspicious nature. Dr. Savage suggested that there was a special form of insanity which was most frequent at this period, in which, with progressive deafness, there was progressive development of delusions of suspicion. This, he said, was very incurable, and he suggested that it was a parallel to general paralysis of the insane, affecting the sensory side and not as fatal as the disease affecting the more organic side of life. There was a great tendency to the development of disorders of the reproductive organs and of the feelings associated with their function; thus there were frequently jealously, irritability, and general domestic incompatibility. There were also frequently hysterical disorders of one form or another. There were with this condition false ideas as to marriage proposals and the like, and also a redevelopment of sexual desire which might lead to various forms of sexual excess. There was a great tendency to seek stimulants—for example, morphia. The prognosis was fairly good in many of the cases, though a large proportion, especially of those who had had other attacks of insanity, did not recover. He submitted tables of a series of cases from Bethlem Hospital, and he showed that the climacteric onset very rarely relieved those suffering from mental or nervous disorders. He advocated general rather than special measures, and did not advise the promiscuous use of the bromides.

Mr. RICHARDS could not admit that the menopause was such a potent factor in the creation of mental disease as Dr. Savage believed, for the majority of female patients admitted into asylums were of an age long before menstruation ceased. The symptoms which he had mentioned occurred in all forms of insanity which affected women. In those cases of recurrent insanity which occurred with menstruation, and which were often maniacal in character, the attacks did not cease with the menopause, but the insanity then altered its form. He thought that if anything analogous to the change of life happened in man it would be at the time when the reproductive powers were failing rather than when the individual gave up his ordinary employment. Melancholia was the type of mental unsoundness which predominated at the present time, and this would explain the large number of cases that Dr. Savage had met with. He asked if the persons attacked had been previously in good mental health.

Dr. ALTHAUS agreed with Dr. Savage as to the connexion between the menopause and certain diseases of the brain. He had known of women being in perfect health till the menopause was established, and then a mental breakdown occurred, especially if the menopause took place suddenly. He thought that further evidence was derived from the study of the peculiar form of insanity that occurred after gynæcological operations. Of this, which had not been so carefully studied as it deserved, he believed there were two forms—a delirium which would last from a few days to a week, and a profound melancholia developing about three months later. As a knowledge of myxœdema had come to pass through a study of the cachexia strumipriva, so in this instance if we learnt more of what took place mentally after the removal of the appendages we should gradually arrive at a truer knowledge of what mental trouble was due to the menopause and what was not. He had seen not only melancholia develop, but also a pseudo-general paralysis, and the patients usually recovered in two or three years. Certain forms of epilepsy might also develop for the first time with the onset of the menopause, and tinnitus aurium he had also seen begin within a week or ten days of this event.

Dr. GRIFFITH said that it would be easy to take an exaggerated view of the importance of the climacteric onset. The results of oöphorectomy were not to be taken as indicating what would happen after the menopause, for there was really no comparison between the artificial and the natural menopause. In the artificially induced menopause child-bearing and menstruation ceased together, but in the natural climacteric the cessation of child-bearing usually occurred ten years before the cessation of the menses and was due to the arrest of the power of developing healthy ova or of extruding them. His small experience amounted to this: that where a pathological condition of the Fallopian tubes was found this had no influence of importance on the mental condition of the patient.

Dr. CULLINGWORTH pointed out that gynæcologists saw the slighter cases of depression, whereas the graver instances went to the alienist. Before any opinion could be given as to the frequency of association of mental disease with the menopause it was necessary, not only to study the mental cases from the asylums, but also to consider those cases met with in the out-patient rooms and in private practice. It was certain that there were numbers of women who were not more nervous than other women until the menopause was entered on, but who then developed distressing mental symptoms; and he believed that depression occurred in a much larger proportion than Dr. Savage's tables would appear to indicate. He had no personal experience of the removal of healthy appendages except for fibroid of the uterus, and where the ovaries had been removed for disease he had seen no mental trouble follow. After double ovariotomy or removal of the appendages for bilateral disease, there occurred, with the cessation of the menstruation, flushings and other nervous phenomena such as depression, and these symptoms by bringing the cases into line with the natural menopause made their study useful.

Mr. RICHARDS added that he had recently seen a woman whose ovaries had been removed eighteen months ago for bilateral disease, and a few weeks later a complete change occurred in her character, delusions which increased in grandeur developed, and she drifted towards chronic insanity and dementia.

Dr. ROUTH complained that the alienists, in their observation of these cases, did not discover if there were any uterine or ovarian disease to explain the mental symptoms. He had heard of several cases where, after operations on the uterine or ovarian organs, the patient had become insane. It was certain that after the removal of the ovaries women became a changed class, suffering from intense depression.

Dr. SAVAGE, in reply, said that the proportion of women who broke down at the menopause was greater than at any other period of life. He had stated that the climacteric onset as an absolute cause of insanity was extremely rare. General paralysis and epilepsy had occurred rather more frequently than he had expected. In certain American asylums, where the medical officers were women, the sexual organs of the patients were carefully examined, but no marked gain in knowledge had occurred from that procedure.

CLINICAL SOCIETY OF LONDON.

Cancrum Oris after Typhoid Fever.—Resection of Symphysis Menti for Cancer of Mouth.—Ectopia Vesicæ.—Morphœa of Fifth Nerve.—Excision of Palmar Synovial Membranes.—Congenital Syphilitic Hepatitis.—Dark Urine in Pernicious Anæmia.—Congenital Tumour of Foot.—Gastro-Jejunostomy.

A CLINICAL MEETING of this Society was held on Oct. 27th, Mr. HULKE, President, in the chair.

Dr. FREDERICK TAYLOR showed a girl aged eleven who developed symptoms of Cancrum Oris when suffering from a severe relapse of Typhoid Fever. On a temporary molar being removed foul pus escaped, and this appeared to be the determining cause of the trouble. Carbolic acid solution (1 in 10) was at first used every half-hour, and later nitric acid

was freely applied under an anæsthetic, which at once stopped the sloughing process. The patient made a good recovery, but some contraction of the mouth resulted.

Mr. STANLEY BOYD showed a woman sixty-one years of age from whom he had removed two separate Epitheliomatous Growths—one of the tongue and the other of the frænum and floor of the mouth. He resected the symphysis of the lower jaw and removed the growth, putting in a spanner of stout silver wire between the ends of the bone. The mucous membrane readily united over the wire. He mentioned that in a previous case he had used a piece of a knitting-needle to connect the ends of the bones. Other cases of the kind had been reported by M. Ollier of Lyons.

Mr. CHARTERS SYMONDS showed a case of Ectopia Vesicæ on which he had operated. He first made an incision all round the mucous surface, whereupon the bladder was dissected from the abdominal wall, turned over, and united in the middle line from top to bottom. To cover it he then brought up the scrotum with the skin of the penis, making a button-hole in the perineum, out of which he extruded the glans penis. Unfortunately the bladder was becoming herniated through the small orifice that had been left at the lower part.

Mr. BALMANNO SQUIRE showed a male patient suffering from Morphœa of the Fifth Nerve, which had somewhat improved under strong counter-irritation.

Mr. PEARCE GOULD showed a man aged twenty-six who developed a Compound Palmar Ganglion following a sprain of the wrist. He dissected away the synovial membrane of both sheaths with scissors, and the patient recovered with a useful hand.

Dr. HALE WHITE showed a child suffering from Congenital Syphilis and Disease of the Liver, hard and irregular nodules being distinctly palpable. Interstitial keratitis was also present, and the mother had been under treatment for syphilis. He also showed two specimens of Dark Urine from a man and a woman respectively. The man's case was very rapid; optic neuritis developed, and though he improved at first under arsenic he quickly sank. The liver gave a typical Prussian blue reaction. The woman was still alive and had mended somewhat under large doses of arsenic. In both instances the colouration was due to hæmoglobin and not to pathological urobilin.

The PRESIDENT showed a child with a Congenital Affection of the Foot. There was a large, bossy, soft mass on the dorsum of the foot and extending up towards the leg. He thought it was either molluscum fibrosum or nævo-lipoma. There was a history of "maternal impression." The mother, while carrying twins, was pressed by a man to buy some soles, and as she refused he became angry and threw them down before her. The other twin was said to have a mark on the dorsum of the foot which was shaped like a sole.

Mr. BIDWELL read the notes of a case of Gastro-jejunostomy. The patient was a man sixty-nine years of age, who was suffering from cancer of the pylorus, and the operation was undertaken to relieve the pain and vomiting. An incision was made in the left linea semilunaris, and the jejunum was united to the anterior surface of the stomach by Halstead's method for lateral intestinal anastomosis, twenty sutures only being inserted. The patient made a rapid recovery, not vomiting once after the operation, but he died five weeks later from exhaustion and extension of the disease. Special attention was drawn to Halstead's method of suture, which was compared with the use of Senn's plates. Reference was also made to the methods of Messrs. Paul and Mayo Robson. A table of fifteen published cases, in which gastro-enterostomy had been performed in England since Mr. Jessett's paper was read before this Society last year, was appended. Eleven of these cases recovered from the operation, the remaining four dying from shock or exhaustion. Including the seventeen cases collected by Mr. Jessett, a total of thirty-two cases was obtained, with nine deaths, which was equal to a death-rate of 28¼ per cent.—The PRESIDENT agreed that the patient died of his malady and not from the operation. He was not keenly in favour of the use of bobbins and plates in these cases, for they favoured reflux into the stomach, and this militated against the success of the operation.—Mr. BALLANCE said that he had conducted a series of experiments with Mr. Edmunds in order to ascertain the best method of joining the stomach and the intestine. He referred to six cases of gastro-enterostomy which had been performed in the neighbourhood of Liverpool; the result was satisfactory for six or eight weeks, and then the opening into the stomach became closed and the old symptoms returned. As the result of his experiments, he came to the conclusion that Paul's method was decidedly the best; a bony ring was inserted uniting the jejunum with the posterior surface of the stomach, a wound being made in the anterior gastric wall to enable this to be done. The great success of this method was due to the fact that a portion of the stomach wall sloughed away, leaving a large opening in the small intestine, which in a large dog did not contract after many months. He thought that Senn's method ought to be altogether superseded by Halstead's when a lateral anastomosis was necessary.—Mr. CHARTERS SYMONDS had performed this operation three times: twice for carcinoma and once for stenosis following old ulceration. In the latter case the symptoms had lasted for twenty-five years. He first connected the intestine with the stomach by Senn's plates; in five weeks the patient was as bad as ever, and on opening the stomach the aperture made at the first operation was found to be quite closed. He enlarged the opening and sutured the mucous membrane at the edges, but in spite of this it closed again. He therefore performed a third laparotomy, cut out a piece of the gastric wall as large as a half-crown piece; he then divided the jejunum, fastened the cut lower end into the hole in the gastric wall, and made an opening further down in the jejunum, into which the lower end of the duodenum was inserted. A good recovery followed. He had since given up Senn's method in favour of lateral anastomosis by Halstead's plan.—Mr. MANSELL MOULLIN had performed this operation on two occasions. In the first he used Senn's plates and made an opening in the intestinal wall large enough to pass two fingers through. The patient died six weeks later, and the orifice was then only large enough to admit the tip of the finger. He felt sure that later it would have closed altogether. In the other case he used the bone bobbins of Mr. Mayo Robson. There was a considerable amount of regurgitation in both cases. In the first it was considerable, but ceased when the Senn's plates were absorbed.—Mr. BATTLE gave some evidence in favour of Senn's method. Last year he performed a gastro-enterostomy in this way, and the patient was completely relieved of all symptoms for four months. There was no regurgitation, and death appeared to be due to exhaustion from the disease.—Mr. WARRINGTON HAWARD said that these patients were usually operated on only when exhausted and when the disease was far advanced, hence it was necessary to operate rapidly; to this end Senn's plates were most useful, and he thought they should not be condemned without adequate evidence of their faults. Regurgitation depended probably not only on the condition of the stomach as regarded the malignant disease but on the position of the orifice made. The after-contraction would depend both on the condition of the stomach and on the details of the operation. He did not consider that the evidence against the plates was so far very convincing.—Mr. PEARCE GOULD had performed this operation in one case of cancer of the pylorus with much distension of the stomach. He opened the abdomen in the middle line and united the jejunum to the stomach as near the pylorus as the growth would admit. He made an incision into each viscus and then united the cut edges by the continuous silk suture, a few Lembert's stitches being placed on each side for fixation. The symptoms were relieved, but the patient died suddenly on the sixth day. Two questions required to be considered—viz., the part of the stomach with which it was best to make the connexion, and the best method of making the union.—Mr. BIDWELL, in reply, said that he did not undertake Paul's operation, because it appeared to take so much longer. It was difficult to judge as to the methods from experiments on animals, because in them no pyloric obstruction existed, and hence the artificial opening would tend to close more readily. He fixed the intestine to the cardiac end of the stomach on account of the great extent of the pyloric growth.

HARVEIAN SOCIETY.

Hypnotism, with Illustrative Cases.

A MEETING of this Society was held on Thursday, Oct. 19th, Mr. MALCOLM MORRIS, President, in the chair.

Dr. J. M. BRAMWELL stated that he wished to confine his remarks to the practical side of the subject, to avoid theory and controversy, and to present hypnotism as it appeared to the medical man who employed it, not for experiment, but for the relief or cure of disease. In his own practice he had succeeded in inducing hypnosis in 88 per cent. in cases of both sexes, of varying ages and social positions. Dr. von

Schrenck-Notzing (Munich) had recently published some international statistics, contributed by fifteen observers in nine different countries, and these gave 6 per cent. of failures in 8705 cases. In a recent letter Dr. Wetterstrand of Stockholm said: "The number of my cases up to Jan. 31st, 1893, amounts to 6500, of which 105 were not influenced; of these 75 had only been tried once, or at most twice." He stated that the worst subjects were hysterical and nervous persons, especially neurasthenics; but with patience one could, even with these, gain the desired end. This view was supported almost without exception by those who practised hypnotism, and Professor Forel of Zurich considered every mentally healthy man to be naturally hypnotisable. The Second International Congress of Experimental Psychology "showed a more universal admission of the therapeutic advantage derived from hypnotic suggestion and a general recognition of the important fact that susceptibility to hypnotic influence is not in itself an indication of hysteria or of any morbid condition whatever in the subject." Amongst Dr. Bramwell's refractory cases there was usually a direct relationship between the duration of the illness, the mental instability of the patient, and the difficulty of inducing hypnosis. The Nancy method—i.e., verbal suggestion—was the one generally employed for the induction of hypnosis. The artificial character of the hypnotic stages was now recognised, and both the classical stages of La Salpêtrière and the more minute subdivisions of Liébeault were equally discarded. Max Dessoir divided the stages into two large groups, separated by the extent of the functional disturbances. In the first merely the voluntary movements showed changes; in the second abnormalities in the functions of the sense organs were added. Though it is certain that hypnotism might be employed in such a way as to produce evil results, Dr. Bramwell had neither seen nor heard of a single instance in his own practice or in that of others where hypnotism used for curative, not experimental, purposes had caused the slightest bad effect. He then hypnotised two patients and drew attention to the facts that they quietly and without any excitement passed into a state of hypnotic trance, and that the depth of this varied from a slight drowsiness without loss of consciousness to a profound sleep with, on awakening, entire forgetfulness of what had occurred. During this condition the patients were more or less anæsthetic; no other phenomena presented themselves without suggestion. The medical treatment consisted in making suggestions for the relief or cure of morbid conditions without experiment of any kind. Dr. Bramwell pointed out that it was unnecessary to interfere with volition, and that the entire control of this state might and should be left in the patient's own hands. In every instance as soon as hypnosis was induced Dr. Bramwell suggested: firstly, that no one else should be able to hypnotise without the combined assent of both the patient and the operator; secondly, that hypnosis should not be reinduced without the express consent of the patient; and, thirdly, that the patient, when in the hypnotic state, should have complete power to reject suggestions at will so that none would be effectual save those previously agreed to in the normal condition. These safeguards had invariably proved trustworthy and their efficiency had been frequently practically demonstrated before competent medical experts. The details of a number of cases in which hypnotic anæsthesia had been induced for operative purposes were given. While fully admitting that until the uncertainty in reference to the induction of primary hypnosis was removed hypnotic anæsthesia could never rival ether or chloroform, still it possessed certain advantages, for, given deep hypnosis with anæsthesia, the condition could be reinduced almost immediately at any future time, and could be maintained indefinitely or terminated at will. The patient could be placed in any position and would alter that position at the command of the operator; there was absolutely no risk; there was neither vomiting nor other unpleasant symptoms afterwards; and all pain following the operation could be entirely prevented by suggestion. Cases of successful confinement during hypnosis by Dr. von Schrenck-Notzing and others were given some of the advantages of hypnosis in labour being removal of consciousness of pain, regulation of position of limbs, body, &c., and increase or diminution of uterine contractions by action of the voluntary muscles under suggestion. Dr. Bramwell cited more or less in detail cases of epilepsy, melancholia, hysteria, neurasthenia, dipsomania, neuralgia, insomnia, deafness, nocturnal incontinence of urine, sea-sickness, hystero-epilepsy, hyperidrosis, excessive blushing, hysterical aphemia, certain forms of skin disease, &c., from his own practice and from those of Liébeault, Bernheim, von Schrenck-Notzing, Grossmann, Forel, Carl Gerster, Kingsbury, Lloyd Tuckey, Freud, Fraipont, Tyko Brunnberg, DeJong, and others, where cure or improvement had resulted from hypnotic treatment. Dr. Wetterstrand asserted "that in some diseases too much importance has been attached to suggestion and not enough to artificially induced sleep." He put some of his patients to sleep for from a month to six weeks at a time, and an interesting account of this was to be found in the *Zeitschrift für Hypnotismus* of October, 1892. He was of opinion that in addition to epilepsy, hystero-epilepsy, hysteria, &c., various other diseases might be cured by prolonged sleep, especially severe cases of anæmia and chlorosis, and thought that the deeper and longer the sleep the more certain was the good result, an opinion shared by Forel. Prolonged sleep was devoid of danger; on awakening there was usually a slight sensation of fatigue for a few hours, which quickly disappeared. The patient should be placed *en rapport* with a nurse or friend instructed to feed him at regular intervals without awakening him and without talking to him more than was necessary. On this subject Dr. Wetterstrand said in a recent letter: "I have frequently used prolonged sleep in epilepsy, and I know of nine or ten persons who, since this treatment, have not had a single attack for many years. I have also found it very successful in dipsomania." In conclusion, Dr. Bramwell did not regard hypnotism as a rival to ordinary medicine or as a specific for all diseases, but simply as an additional weapon for the combat of disease with which every medical man should be acquainted and which all, if they wished, could employ.

Dr. BURNEY YEO asked Dr. Bramwell whether he had attempted to analyse and determine the nature of the mystic relation which seemed to exist between the hypnotiser and the hypnotised. In the two cases exhibited that evening a merely momentary glance from Dr. Bramwell had thrown them into the hypnotic state. It was the nature of this mystic relation established between the hypnotiser and the hypnotised that he thought it most important to analyse and understand. They were all aware of the remarkable results to be obtained from suggestion quite independently of hypnosis. He mentioned an instance in which he had himself almost instantly induced sleep in a sleepless convalescent from fever by what could only be regarded as simple suggestion. It was necessary not to confound the two things, as had often been done. As to the performance of surgical operations during the hypnotic state, he thought the uncertainty of being able to establish hypnosis in a great number of patients rendered it impossible to rely upon it for ensuring anæsthesia. He mentioned four cases which had recently come under his own observation—one of asthma, another of neuralgia, and two of insomnia—in which the attempt to afford relief by hypnotism had failed. He referred to the composition of the committee appointed by the British Medical Association to inquire into this subject, the members of which were scattered over the United Kingdom at great distances from one another. London was surely large enough to afford a suitable committee, say, of two hypnotisers and four, five, or more observers, who could work together and determine to what extent hypnotism could help them as medical practitioners.

Dr. LLOYD TUCKEY said that he had been using hypnotism in his practice during the last five years, having been led to do so by what he saw at Nancy in 1888. He had found it especially useful in functional disorders of the nervous system, such as writers' cramp, hystero-epilepsy and choreiform movements. It often relieved pain and produced sleep even in incurable diseases such as cancer and locomotor ataxy. In one bad case of real epilepsy the severity and number of the fits had greatly diminished; and the patient's intellect had much improved. He had tried hypnotic suggestion in over fifty cases of chronic alcoholism, and had obtained good results in a large proportion of them. In his hands it had rapidly cured one bad case of stammering in a boy aged fifteen and had benefited others. He had used it in combating bad habits in children and had found it especially valuable in masturbation before puberty. It generally cured enuresis nocturna dependent on functional causes. He had used it to overcome inveterate idleness and bad temper in children and had seen it succeed after ordinary influences had failed. He had never seen or heard of untoward results following the use of hypnotism in the hands of medical men, and he thought that the time had now come to test the value of the treatment on a large scale in our hospitals.

In reply to Dr. Burney Yeo, Dr. BRAMWELL said that the relationship between patient and operator, or what

was usually termed *rapport*, was a somewhat complex one and varied in different cases. A special study of the phenomena in question was to be found in a recent work by Dr. Albert Moll of Berlin.[1] The objection to hypnotic anæsthesia owing to the uncertainty of its primary induction Dr. Bramwell had already fully acknowledged. It must not be forgotten, however, that Dr. Esdaile succeeded in inducing complete anæsthesia by this means and thus was able to perform 261 painless operations, including lithotomy and amputation above the knee, and the fact that deep anæsthesia could sometimes be almost immediately induced by suggestion in healthy, non-neurotic men was surely one of great scientific interest. It was true that hypnotism had its failures as well as its successes, but in these cases this objection told with equal if not greater effect against ordinary medicine, for it must be remembered that patients in this country rarely turned to hypnotism until the usual resources of medical treatment had been entirely exhausted. Dr. Bramwell felt certain that if a committee of investigation were formed in London it would meet with warm support from all those interested in the subject.

PROVINCIAL MEDICAL SOCIETIES.

MIDLAND MEDICAL SOCIETY.—A meeting of the Midland Medical Society was held at the Medical Institute on Wednesday, Oct. 18th, the President, Mr. EVANS, in the chair.—Mr. EALES showed a man aged twenty-one, who had suffered from a severe form of episcleritis in each eye of eleven months' duration Large nodules were seen on the sclera, and the margin of the cornea had been infiltrated, but the condition had recently much improved. The history and appearances pointed to struma as the cause of the disease.—Mr. JORDAN LLOYD showed a specimen of Cancer affecting the whole Cervix Uteri, in which vaginal hysterectomy had been successfully performed. The patient was thirty-two years of age, and the growth was of several months' duration. The operation was performed some months ago, and the patient was quite well.—Mr. LUCAS showed a Periosteal Sarcoma of the Femur, removed by amputation at the hip-joint. The patient, a girl aged twelve, had noticed a swelling for five months. Amputation was performed by Furneaux Jordan's method after the application of an elastic tourniquet in order to control the hæmorrhage. There was very little loss of blood or shock, and the wound was soundly healed in twenty-three days. The growth proved to be a round and spindle-celled sarcoma.—Dr. KAUFFMANN showed a specimen of Bronchiectasis of both Lungs, affecting the lower lobes more than the upper, and the left more than the right. The symptoms were unusual, inasmuch as the patient, a youth aged twenty, presented the appearance of a person with advanced phthisis and spat up a large quantity of sputum—thick, homogeneous, and possessed of the putrid smell commonly found in cases of perforating empyema. The dilated bronchi showed very irregular bulging of their walls, the lungs presented but little interstitial growth, and the bronchiectasis appeared to be due to a prolonged inflammation of the bronchial racemose rather than to a dragging of interstitial new growth.—Mr. BARLING read a paper on Cases of Peritonitis treated by Drainage. He showed at the meeting six of the patients on whom he had so operated.

READING PATHOLOGICAL SOCIETY.—The annual meeting of this Society was held in the library of the Royal Berkshire Hospital on Wednesday, Oct. 25th, when an address was delivered by Mr. HUTCHINSON on "The Printing Press and Library in relation to Medical Progress." The chair was occupied by Mr. O. C. MAURICE, the President. Mr. HUTCHINSON said that when, thirty-six years ago, the New Sydenham Society was at its birth he asked Sir William Laurence to assist the editors, and received from him the characteristic reply that he considered the over-production of medical literature the evil of the day. "I turned," said Mr. Hutchinson, "to the catalogue of the Royal Medical and Chirurgical Society and the index of its transactions, and I found, on counting the titles of books and papers, that no living surgeon had used the printing-press more than himself. As I felt assured that it would have been a distinct loss to medical science had any one of Laurence's papers been unwritten or remained in his desk, I determined to prefer his example to his precept, and to believe that the latter was based rather upon the conservatism natural to advancing years than upon a correct perception of the needs of our profession. The New Sydenham Society was accordingly founded, and it has since been responsible for the expenditure, in the endeavour to spread abroad a sound medical literature, of near upon £100,000. Now the kind of activity which the spending of such a sum of money in the printing of medical books indicates has been going on not alone in the Society's council room, but all around us. I hold in my hand a bound volume of THE LANCET for 1843, and of the *Medical Journal* of the same date, and I ask you to compare them with their successors of the present year. In the half century they have more than doubled in their contents and size." After commenting upon the ephemeral value of much of the writing of the present day, and explaining that he used the word "ephemeral" in no reproachful sense, Mr. Hutchinson addressed himself to the question whether the present enormously increased production of medical books may not have its disadvantages as well as its gains. "Formerly," he said, "one only of our metropolitan hospitals published its annual volume of reports; now we have five or six. Edinburgh also sends us this year a work which we trust will form the first of a long series, and from our provincial centres—Bristol, Manchester, Liverpool, Glasgow, Sheffield, Birmingham, and Newcastle—there come in rapid succession annual, quarterly, or even monthly volumes. Let anyone who wishes to realise what medical literature has really attained to glance at the groaning tables of the library of the Royal College of Surgeons or the Royal Medical and Chirurgical Society. Having done so he may presumably be ready, I suspect, after much inspection, to think that after all Sir William Laurence was right, and there may be such a thing as over-production." He then went on to point out that the plethora of books was a testimony to two facts: firstly, that the printing-press at the present day is the foremost means of advancing medical knowledge; and, secondly, that the mere accomplishment of primary publication is by no means sufficient for the requirements of the medical reader; and in this connexion he referred to the necessity of a public library, and the equal necessity that those libraries should be properly arranged. "Formerly," he said, "it was sufficient that a library should afford convenient shelf-room for books, and that their custodians should see to the prompt binding of all periodicals and to the arrangement and cataloguing of all works under their care. Work of a far more responsible character is now demanded of them, especially in medical institutions. A library should no longer be a mere depôt of books; it must undertake the task of rearrangement and somewhat minute sub-classifications of the subject-matter of books. It is only in some such way as this that we can hope to meet the pressing needs of the modern reader, and let us never forget that in the case of our profession the term 'modern reader' means a searcher after the best means for the mitigation of the sufferings of mankind. Searchers after such information often now labour under disadvantages as to want of time and pressure of engagements. If you realise these facts you will see the importance of making such provision for the convenience of the medical reader. My first suggestion is that you should no longer pile upon your shelves hosts of books for reference, but that the librarian of the present day should take to pieces the works, and especially the journals, that come under his notice, and that he should classify their contents, keeping every subject distinct, so that he will be able to put into the hands of anyone who consults his library one single volume containing all the necessary extracts on that single topic, instead of having to give him half a dozen books, to all of which he will have to refer." Mr. Hutchinson then briefly indicated the method in which the librarian could practically manage this task, provided he were a sound judge and was able to differentiate between the important and the unimportant, and concluded by stating that in his opinion there was no surplusage of medical literature, although deficiencies in arrangement gave that appearance. "That developments in library management may be costly," he said, "I do not deny, but surely the expenditure of a few pounds, or of a few thousands, ought not to be grudged when the health and happiness of the community are at stake. To be parsimonious in such matters is the very meanest and most delusive of all forms of niggardliness."—A vote of thanks to Mr. Hutchinson, proposed by the CHAIRMAN and seconded by Mr. BARFORD, having been carried with acclamation, the proceedings terminated.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this Society was held on Thursday, Oct. 12th, Mr. RICHARD

[1] Der Rapport in der Hypnose (A. Abel, Leipzig, 1892).

FAVELL, President, in the chair.—The PRESIDENT delivered the inaugural address of the session on "The Prevention of Puerperal Septicæmia." Attention was drawn to the fact that by the rigid carrying out of aseptic and antiseptic measures the death-rate in lying-in hospitals had been reduced to less than that of private practice. Dr. Bloxall's statistics showed that the death-rate was higher in the provinces than in London, and higher in country districts than in large towns. The reason of this, no doubt, was that in country districts a smaller proportion of obstetric practice was in the hands of those who had been taught to carry out the treatment of midwifery aseptically. Until a satisfactory Bill was passed for the better training of midwives a very much lessened mortality could not be looked for. It was nearly fifty years since Semmelweis demonstrated the septicæmic nature of puerperal fever and brought home the indisputable fact that it was a preventable disease. To him was due the credit of having removed puerperal diseases from the realm of theory and of showing that in the vast majority of cases they were due to infection from without. Since the days of antiseptics much had been accomplished in the direction of placing puerperal fever in the class of preventable diseases, the results of both hospital and private practice having much improved. Experience taught the importance of aseptic rather than antiseptic management of the patient. The mortality of lying-in hospitals might be reduced to a few per thousand, and it was the duty of every medical attendant to surround cases in private practice with the safeguards that were being used in hospitals.—A vote of thanks to the President for his address was proposed by Dr. Keeling, seconded by Dr. Dyson, and carried unanimously.

TORQUAY MEDICAL SOCIETY.—A meeting of this Society was held at the Torbay Hospital on Oct. 25th, Dr. POWELL in the chair.—Dr. RICHARDSON read a paper on the Treatment of Tuberculous Phthisis in its Early Stage. He explained, firstly, that the tubercle baccilli, being present in 37 per cent. of healthy persons, it was not necessary that the disease should be introduced from without in all cases, and that anything which lowered the system would act as a predisposing cause. He showed from the writings of authorities on the subject that high altitudes had not accomplished what was expected of them when any real physical signs were present, and that, as he stated at the Bournemouth meeting, the South Coast health resorts, such as Torquay, Ventnor, Bournemouth &c., showed results as good if not better than had been attained elsewhere; that purity of water and perfect system of drainage were of much importance; and that plenty of sunshine, an ozonic atmosphere, and home comforts aided considerably. He also called attention to the fact that cod liver oil lowered the temperature in all acute diseases of the lungs, and quoted a number of cases corroborating this. He advised that the patient should sleep in a room wherein some antiseptic such as eucalyptol or carbolic acid had been vaporised. He also quoted cases of cure and relief following the treatment in Torquay.—Mr. WATSON (house surgeon, Torbay Hospital) showed a case of Cancer of the Œsophagus, the patient wearing a Symond's tube. He also showed the following pathological specimens: (*a*) Ulceration of Intestine from Foreign Bodies; (*b*) Calculi Removed from the Urethra; (*c*) specimen of Rhinolith.

UNIVERSITY COLLEGE, BRISTOL.—The annual social gathering of the *alumni* of the College was held on the 27th ult. at the Imperial Hotel, Bristol, and was attended by many influential friends of this seat of learning, in addition to some hundreds of the past and present students of the medical school. Mr. W. G. Grace occupied the chair. The usual loyal toasts having been duly honoured, those having a more local and personal interest were brought under notice. The Right Hon. Sir Edward Fry proposed "University College, the Royal Infirmary, and the General Hospital, Bristol." This toast was responded to by Professor Young, Dr. Long Fox, and Dr. Harrison. Dr. J. G. Swayne proposed "The Cricket, Football, and Dramatic Clubs," and in doing so spoke of the great advantage to students of active exercise. He had, he said, swum a mile and a half when sixty-five years of age. In proposing the toast, "Past and Present Bristol Students," Mr. Albert Fry referred to the number of great names which had been associated with the school. Mr. Munro Smith proposed "The Health of the Chairman," whom he described as the greatest cricketer of the age, a compliment which the chairman gracefully acknowledged. Songs and recitations varied the enjoyments of a very successful evening.

Reviews and Notices of Books.

Auscultation and Percussion, together with Other Methods of Physical Examination of the Chest. By SAMUEL GEE, M.D., F.R.C.P. &c. Fourth Edition. London: Smith, Elder and Co. 1893.

IN noticing the fourth edition of this well-known work we have nothing but praise to offer for its method, its matter, and its style. Within a compass of 300 clearly printed pages Dr. Gee has produced a handy volume, which we regard as one of the classics of medicine. In a graceful Latin dedication to the memory of Laennec, the author, in terms which evince a warm regard for that illustrious physician, states that he desires not to emulate but to imitate him. But he is no blind worshipper. Regretfully and respectfully he remarks upon his master's failure to appreciate aright the lessons taught by auscultation of the heart. Throughout the volume, however, there is evidence of his careful study and appreciation of Laennec's work.

The volume consists of a first and second part; the former deals with "the pure science of physical signs," and the latter with their "applied science." A feature which imparts great value to both portions of the work is the fact which the author mentions in a note—namely, that he has taken great pains with the terminology. "I have used technical words," he remarks, "with strict adherence to their original meaning. I have not taken upon myself to pervert the meaning of words already well defined, nor have I invented new words to denote signs already well denominated." The variation of the terminology in different schools and in the works of different authors is a source both of confusion and inaccuracy. In an elastic and progressive science like medicine we cannot expect the precision of terminology characteristic of mathematics; but an endeavour to attain the greatest precision possible and to avoid the coinage of unnecessary words cannot be too emphatically insisted upon.

Dr. Gee does not encumber his pages with much concerning stethoscopes, rigid and flexible; but he states that his remarks on auscultations refer to results obtained by the rigid instrument. That the form of instrument is not, however, altogether an unimportant factor, even in his eyes, is shown by a remark on p. 115, where he says that "bronchial breathing sometimes loses its peculiar quality by conduction through stethoscopes of a certain make." Our own experience is that flexible stethoscopes of various kinds are most suitable for the detection of superficial and easily conducted sounds, while the rigid instrument finds its place in conditions of an opposite nature. The advantage, also, of the exclusion of extraneous sounds in a noisy room by the use of the binaural instrument renders the use of the latter at times advisable.

As regards the matter of this volume there is a pithy precision in some of the author's remarks which is both happy and telling. Thus, on p. 111, he says that "a lesion which causes pectoriloquy lies at the surface of the lung." And again (p. 121): "Bronchial respiration, heard where naturally the breathing is vesicular, indicates obliteration of the damping, spongy structure of the lung"; and (p. 122), "consolidations and cavities are the chief causes of bronchial breathing, as also of bronchophony." These short remarks are worth pages of less comprehensive verbiage. "Ægophony," Dr. Gee remarks, "is nothing but bronchophony with a nasal quality more marked than usual," but he nevertheless appears to think that it has a certain diagnostic value as indicating the vibration of a liquid medium. It seems to bear the same relation to liquid that the term "amphoric" does to air. We are glad to observe this statement from so good an authority, as minimisation of the importance of a true ægophony appears to us to be

inadvisable. The reader will also find evidence of mature experience in such a remark as that "mere prolongation of expiratory sound (the breathing remaining vesicular) is a sign of no importance." The tyro would promptly diagnose organic lesion if he followed the ordinary teaching in this matter.

All that we have said in praise of the section on Physical Exploration of the Lungs applies to the author's treatment of examination of the heart. We are disposed, however, to think that the strength and character of murmur in cardiac valvular lesion are more important than Dr. Gee leads us to infer. Variations in this respect in the same patient and in the same position appear to us to be a valuable index to the force of cardiac contraction. It is perhaps unnecessary that we should have said so much about so well-known a work, but the pleasure we have derived in perusing a book which ought to be in the library of every educated physician must be our excuse. The careful diction and purity and lucidity of style which characterise the work cannot be too highly appreciated. At places its very excellence has the quaintness met with among the earlier writers, who, if less enlightened in physics than our own generation, frequently could write their mother tongue much more correctly than their descendants.

Analysis of Milk and Milk Products. By HENRY LEFFMANN, M.D., Ph.D., and WILLIAM BEAM, M.A. M.D. London: Kegan Paul, Trench, Trübner and Co. (Limited). Philadelphia: P. Blakiston, Son and Co. 1893.

THE processes employed for the analysis of milk have undergone such modification and improvement during recent years that the want of a hand-book embodying those at present in vogue has been keenly felt. It is exactly this want which Drs. Leffmann and Beam's book supplies. No more useful or valuable work on the questions of milk analysis and milk standards has been done than that of the members of the Society of Public Analysts, and it is gratifying to find that American chemists are acknowledging the results of this work which are published *in extenso* in the *Analyst*, the official organ of the Society. Thus, the authors own to having freely drawn from the valuable material in the journal referred to. They must have felt that this would be a sufficient guarantee of the efficiency and accuracy of the processes described. If we offer criticism at all, it would be to suggest that the chapter dealing with the question of the interpretation of analytical results might have been amplified. The analyst requires to be in a position to decide whether a milk has been unduly attenuated by the cow or watered by the unscrupulous dealer. It will be conceded that this is a point difficult to settle, unless certain standards and prices varying with these standards are insisted upon. The authors recommend the employment of Adams' well-known coil method for the estimation of fat in condensed milk, but we have found that the method of Werner-Schmid gives very satisfactory results if the condensed milk is first sufficiently diluted. The system of spelling adopted by American writers and used in this work will not fail to catch the eye of the English reader, if, indeed, it does not irritate him. As examples we may quote the following: Oxid, sulfate, sulfuric, disulfid, &c., &c., *ad nauseam*.

Nursing: its Principles and Practice, for Hospital and Private Use. By ISABEL ADAMS HAMPTON, Superintendent of Nurses and Principal of the Training School for Nurses, Johns Hopkins Hospital, Baltimore. Philadelphia: W. B. Saunders. 1893.

THE writer of this volume has evidently had a large personal experience of all departments of nursing, for every page abounds in practical hints, showing thorough knowledge and a wise discrimination. A high ideal of the profession of nursing is set forth, but mere sentiment is wisely ignored. The first chapter, which is one of the most valuable in the work, states in full detail the curriculum of training necessary for scientific nursing. Two years are assigned for this purpose, and the writer gives a scheme of how the work should be divided, week by week and month by month. Full particulars regarding the best text-books are appended, and it is no doubt natural that the writer should in the main prefer American authorities. The question of diet is fully considered, and the directions which are given are wise and sensible. Instructions on the administration of anæsthetics are also fully stated, and the writer evidently regards this as being a usual incident in the duties of a nurse. We are disposed to take exception to this. Possibly occasions may arise in which the nurse may be called upon to give chloroform, just as she may be exceptionally required to undertake some of the other functions that should rightly appertain to the physician or the surgeon. To admit this is one thing, but to recognise the administration of anæsthetics as being a normal feature of nursing is another and much more doubtful thing. Such a work as this is satisfactory evidence of the high place which nursing has taken as a calling for women. It is not an easy or a romantic life; on the contrary, it is one of unceasing toil and of the most prosaic detail, but it is worthy the energies of any woman who feels in her the stirrings of an honest ambition to render herself a useful force in the world, and who has no prior domestic or other claims upon her time. A few novices in nursing turn back after a trial of a month or two, daunted by the difficulties of the career or disappointed by a rude awakening from sentimental dreams; but very few of those who have got beyond this stage ever regret their choice of a life work.

The Plumber and Sanitary Houses. By S. S. HELLYER. Fifth Edition. London: B. T. Batsford. 1893.

THE fact that this work has now attained to its fifth edition is a sufficiently eloquent testimony to its merits. In the present volume Mr. Hellyer has spared no pains to make the work worthy of its predecessors, as, with the exception of a few chapters, the matter has been rewritten. Unsparing in pointing out the shortcomings and condemning the use of some of his earlier inventions—e.g., the "Triple Dip" trap—the author is equally frank in drawing attention to the merits of his more recent work. In speaking of valve closets, he says: "I should want a perfect closet, or as perfect as it has been made up to this date, and this I believe my 'Optimus' valve closet to be." In pointing out the defects of certain apparatus, the author indulges in comments which appear to us, to speak mildly, to be somewhat far-fetched. Thus, in speaking of the "Eclipse" trap, he says: "Why the patentees have called this trap the 'Eclipse' the writer fails to see, except that they mean by it that they now intend to have nothing more to do with 'd's,' and so drop this letter out at the end of the word 'eclipse,' as they have done at the beginning of the word trap." Writing in the same strain he describes the "manhole drain syphon" as a "Bashi-Bazouk kind of trap"; and in a similarly jocose mood he says, "the exposure of the drain in such an instance is the exposure of the trap, and the only 'ex' about it now should be in the word 'extinct.'" Remarking on the fact of two gallons of water being the quantity required by law to be supplied for each flush of a closet, Mr. Hellyer asks us to "tell it not in Gath, publish it not in the streets of Askalon." Heartily as we endorse the excellent remarks addressed by the author to plumbers in general in the performance of their work, we do not see what purpose is subserved by introducing a facsimile representation of the certificate awarded by Messrs. Dent and Hellyer to their most deserving workmen. Let us hasten to say, however, that the principles laid down throughout the book are of the soundest, and the standard of work to be attained to the best. For those plumbers who elect to be

disciples of Mr. Hellyer the motto must be "Aut Cæsar, aut nihil." The volume is handsomely got up and abundantly illustrated, and will no doubt prove an excellent text-book to all engaged in sanitary work.

Anatomische Untersuchungen über die Osteomalacie. Von Professor Dr. HUGO RIBBERT. Mit zwei gross 4° Tafeln. (*Anatomical Researches in Osteomalacia.* By Professor HUGO RIBBERT. With two large 4to Plates.) Cassel: Th. G. Fisher and Co.

THIS is a volume of the *Bibliotheca Medica*, edited by several distinguished German professors, and is Part 2 of Series C, which deals with pathological anatomy, hygiene, and bacteriology. Dr. Ribbert has already written on this subject in Virchow's Archives. In this monograph he deals with his subject in a very careful and exhaustive manner, and enters with great detail into the changes he has himself observed in the bones in osteomalacia. He finds that these changes are not simple or uniform, that in addition to the softening of bone from solution of the lime salts there is a process of bone formation, and that different results are obtained by the varying intensity of these associated processes. The tables at the end of the work are excellent.

Essentials of Chemical Physiology for the Use of Students. By W. D. HALLIBURTON, M.D., F.R.S. London: Longmans, Green and Co. 1893. Pp. 166.

THE author of this convenient handbook is already well known by his "Text-book of Chemical Physiology and Pathology," and is well qualified by his knowledge and experience to draw up a treatise containing those parts of chemical physiology which it is important that a student should know, and which he can follow out with little expenditure upon apparatus in his own rooms. The book is divided into two parts or courses; the first an elementary one, the second more advanced for older students. A list of the reagents and apparatus required is given, and the first course is subdivided into twelve lessons, which include the consideration of the fats, proteids, albuminates, and albuminoids; milk, flour, and bread; saliva and peptic digestion; pancreatic digestion and bile; and blood and urine. The advanced course takes up some of these subjects again rather more deeply, and embraces in addition the coagulation of the blood and the examination of hæmoglobin, serum, and muscle. In an appendix a description is given of Gowers' hæmocytometer and hæmoglobinometer, v. Fleischel's hæmometer, Soleil's saccharimeter, various polarimeters, Pflüger's air pump, the analysis of gases, and the micro-chemical detection of phosphorus, iron, and glycogen. The selection of subjects appears to be very good, whilst the practical lessons, the author states, are founded on the "syllabus of Professor Burdon Sanderson." The illustrations are numerous and instructive. There are many tables giving English weights and measures as equivalents of the metric system which will prove useful to the student.

An Introduction to Human Physiology. By AUG. D. WALLER, M.D., F.R.S., Lecturer on Physiology in St. Mary's Hospital Medical School. Second Edition. London: Longmans, Green and Co. 1893. Pp. 632.

WE are glad to welcome a second edition of this excellent text-book. The circumstance that it has been so soon required shows that its merits have been appreciated. It has only been augmented to the extent of twenty pages, chiefly owing to the introduction of a well-arranged bibliography. The value of such a work as this depends as much upon what the author has thought right to exclude from the immense mass of physiological knowledge as upon what he has admitted. In this difficult task Dr. Waller has exercised a wise discretion, selecting those facts which it is most serviceable for a medical practitioner to know and stating them in a lucid manner, in proof of which we would refer those who are interested in such subjects to read the Influence of Respiration upon Circulation, the Physiological Action of Cardiac and Vascular Nerves, the Origin and Separation of Urea, and the whole account of the Nervous System. Dr. Waller's treatise is one of the best works on physiology that a student can read.

New Inventions.

A SAFETY SHROUD.

WE have received from Mr. John Gordon, Premier Works, Forest Gate, a specimen of the safety shroud recently invented by him. It is more or less sack-shaped, and when drawn over the corpse is hermetically sealed, thus affording, it is alleged, an absolute barrier to the escape of all fluids or exhalations. It is composed of linen rendered both air-proof and water-proof by being impregnated with a collodion-like solution to which any antiseptic may be added. The part covering the face being as transparent as glass permits of easy recognition of the deceased without risk of exposure to contagion or unpleasant effluvia. There is an ingeniously arranged tube to prevent ballooning of the shroud from any accumulation of gas, which can be directed up the chimney or into some disinfecting medium. The inventor claims for it that a better means of isolating the infectious dead from the living prior to sepulture can hardly be conceived. It is also so moderate in its price as to be within the reach of all classes. It is certainly an original idea, and so long as it is not made an excuse for retaining the body too long unburied may prove of great service.

THE MEDICAL DEFENCE UNION.—The regular fortnightly meeting of the council of this Union was held on the 25th ult. at 25, Cavendish-square. It was announced that, in consequence of the persistent pressure of business, it had been found necessary to continue for the present the holding of meetings twice a week. Several cases of interest were dealt with, and the question of imposing an entrance fee on new members was raised and ordered to stand over for six months. A vote of sympathy with Lady Clark and family was put from the chair, and a letter expressing a sincere desire that speedy recovery may take place in Sir Andrew Clark's case was directed to be sent on behalf of the members of the Union. The presence of Dr. Leslie Phillips at the meeting was noted with pleasure by the members, and satisfaction was expressed that he was able to attend after his well-earned holiday.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—At the next meeting of this Society, which will be held at their rooms on the 16th inst., under the presidency of Dr. J. Murray Lindsay, the associates will consider the report of the Rules Committee, which was remitted to this quarterly meeting for further discussion. Dr. Campbell will again move his resolution, which was deferred at the annual meeting, to the effect that the grant of 4*s.* per week at present given to boards of guardians to pay for pauper lunatics in county asylums, registered hospitals, and licensed houses, should also be given for pauper lunatics (i.e., dements and imbeciles) in workhouse wards or boarded out. It will be proposed that this resolution be sent to the President of the Local Government Board and to the Commissioners in Lunacy, with the view of seeking the aid of those functionaries in giving effect to the resolution. Mr. Beadles' paper on the Treatment of Myxœdema and Cretinism will be further discussed, after which Dr. Weatherly will read a communication on Our Trials and Troubles, and Dr. Menzies will open a discussion on the Future Supply and Status of Asylum Nurses and Attendants.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 4, 1893.

THE London County Council arrived at a decision on Tuesday which will create a considerable feeling of surprise among those who have been watching the interest which this body has shown in the development of its public health administration. Briefly told the story is as follows. The Council had received from the medical officer of health of St. Pancras representations under Part I. of the Housing of the Working Classes Act of three unhealthy areas within that district. The Council raised objection to dealing with these areas under Part I. of the Act, which would have cast the burden of the improvements upon the whole of the county. After endeavouring to come to some understanding with the vestry of St. Pancras, the latter body appealed to the Secretary of State for arbitration, with the result that the largest of the three areas was divided by the arbitrators into two parts, the more costly of which it was decided should be improved by the Council under Part I. of the Act, the other by the vestry under Part II. With regard to the other two areas, the decision was that the vestry should effect the improvements, the Council contributing one-half of the cost. With a view of giving effect to the result of the arbitration the medical officer of health of the county made the statutory representation as to the area which the Council was to improve, and the Public Health and Housing Committee of the Council thereupon submitted to the Council a scheme of reconstruction of this area at an estimated cost of £65,000. The Council, however, has by a majority declined to pass the necessary resolution, and the administration of the Housing of the Working Classes Act, as far as the reconstruction of unhealthy areas is concerned, is, at any rate for the present, at a standstill in London.

The action of the Council cannot in any way be interpreted as a determination not to effect the needed improvement of unhealthy areas in the metropolis; the zeal the Council has shown in sanitary administration is a complete answer to any such suggestion. The reason for declining to carry out a statutory duty is the insufficiency of the funds at its disposal, and the Government is now met by the refusal of a powerful local authority to administer an Act of Parliament because the Government has not recognised its demand for providing the funds which it deems to be necessary for the work. No one can profess to believe that the ratepayers of London are unable to bear the charge of so trifling a sum as that required for the purpose, but the Council appears to wish to emphasise its desire that its operations shall not lead to an increase in the rates, and that either some special method of raising money must be found for the purpose by the Government or London will have to remain in its present condition. The deadlock is, for the moment, a serious one, for the Council cannot continue to expect sanitary authorities to incur, in respect of small areas, costs which it will not bear itself. We say for the moment, because no one expects that the Council will in the end hesitate to impose on the ratepayers the expenses of removing unhealthy areas from London. This is work which must be persevered with.

While the London County Council has thus expressed its opinion as to the costs of improvement schemes in connexion with the Housing of the Working Classes Act, it is pleasing to be able to turn to the course it is adopting to secure the amendment of the London Building Act. The Council's Building Act Committee and its Public Health Committee have not been entirely in accord as to the practicability of enforcing certain requirements of open space for new buildings on land which has been already built on. It is matter for congratulation that the two different policies should have been championed by men of so much ability and practical knowledge as Dr. LONGSTAFF and Mr. BEACHCROFT, and that their joint efforts should have led to the Council deciding to incorporate in their Bill a general requirement that all such buildings should be subject to the same conditions as buildings erected upon land not previously built on, the Council reserving to itself the right to take into consideration cases in which its regulations would cause exceptional hardships. If London had possessed these powers years ago the misuse of land which has led to the creation of unhealthy areas would not have been possible, and there would have been no question of the representatives of London having to consider the extent of their resources in redeeming it. We sincerely trust that Parliament will speedily assent to the Council's views as to the amendment of the Building Acts, and that the widening of streets and the provision of open space about buildings will prevent in the future the imposition of heavy burdens upon the ratepayers.

THE trial of "the Indian oculists," HEERE SHAH, KHAIR DEEN, SHAHAH BEDEAN, and KURIM BAKHSH, on an indictment charging them with a conspiracy to defraud and with obtaining money by false pretences in connexion with operations for diseases of the eye, was concluded on Monday last with a verdict of "Not guilty"; but the foreman of the jury added a rider to the verdict to the effect that they (the jury) deeply regretted that at present there existed no law which would prevent persons so grossly ignorant as the prisoners practising surgery. The Common Serjeant alluded to the operations involved in this system as cruel, antique, and barbarous, and Mr. CRITCHETT and other expert witnesses described them as useless, improper, and cruel.

We need not recall the particulars of some of the operations in order to justify these descriptions of them or to illustrate the laxity of our law, which permits such things to be done to the poor by men with no pretensions to surgical qualification. The English law does pretend to take great thought for the poor in various ways, and to protect them, as it were, against themselves; but at present it does not protect them from bad medicine and from worse surgery, involving the application to the eye, without anæsthetics, of hooks, scissors, and needles and thread by persons with very imperfect knowledge of the eye and of any recent improvements in the diagnosis and treatment of its diseases. Not only so, but the law is so framed at present as to

constitute a protection to such persons. It was obvious from the address of the counsel for the defendants in the case and the summing-up of the Common Serjeant that they would escape; that the law would do for them what it failed to do for the poor wretches who submitted to their operations and who in some instances gave them large fees; and this is what has actually happened. The victims are victimised without remedy, and the culprits go scot-free.

We are not, however, altogether dissatisfied with the trial. The conclusion of the matter, as far as the past is concerned, is, indeed, lame and impotent. But the Common Serjeant has pretty plainly intimated that if "the Indian oculists" repeat such performances after the exposure of their real nature by scientific men they will not be likely to escape so easily. "It could never again," he said, "be urged that the men were ignorant. He had been careful to have all the medical evidence explained to them, and they now knew that their methods were obsolete and barbarous." This is something; but it is indeed little. The few grains of satisfaction which we derive from a consideration of the circumstances of the trial arise from the fact that it involves an admirable exposure of the absurdities of our existing law, and that it has drawn from the jury a very strong expression of the need, in their opinion, for its alteration. "They deeply regret that there exists at present no criminal law to prevent persons with such gross ignorance as the defendants from practising surgery." It is satisfactory, too, to know that the Common Serjeant entirely concurred in this rider to the verdict. "Good faith" is an excellent quality, but that it should cover defects of knowledge and such pretentious claims as were disclosed during the trial cannot for a moment be defended. As *The Times* well suggests, if the cruelties which were practised on the boy TURNER had been practised for wise and intelligent ends, but without a licence, on a cat or a rabbit, they would have subjected the operator to very serious legal risks. It is strange that the law which takes thought for inferior animals should allow human beings to be experimented on in the ignorant ways exposed in the trial. It is surely time to make the law stronger and to let all ignorant pretenders know that, whatever their *bona fides*, and whatever their confidence in their own powers, they will be punished as criminals if in this country they assume functions which to the common people imply special knowledge and an acquaintance with recent methods of cure. We are not, indeed, quite sure that a more severe construction of some of the words of the 40th clause of the Medical Act would not have been justified. This clause makes it penal in anyone to use the "title of a physician, doctor of medicine, licentiate in medicine or surgery, bachelor of medicine, surgeon, general practitioner or apothecary, *or any name, title, addition, or description implying that he is registered under this Act.*" The word "oculist" is, we fancy, vulgarly understood by many people to convey an impression of qualification in a medical or surgical sense, and its use has very properly been deprecated by ophthalmic surgeons when applied to them; but, be that as it may, the impotent conclusion of this case should open the eyes of the public as it has those of the jury to the necessity for an alteration in the Act of 1858. We are well aware of the forces which quackery of all kinds has on its side. We are not insensible to the defects of medical and surgical science, and to that tendency in human nature that leads it to look to the ignorant and the unskilled when those who know the limits of their own art can promise but little. It is not in medicine alone that quackery exists, but it is there that it is most evident and in which its effects may be most cruel and disastrous. Consequently it is there that the law should be most protective. The principle has long been recognised in our legislation, but not very perfectly; and it is the poor who are the victims of this state of the law. They will spend over a dangerous quack or a worthless remedy the money that they can ill afford to part with. It is gratifying to notice that the public press gives voice to the general and strong approval of the rider of the jury. We would strongly emphasise the reasonableness of it and take the liberty of urging on the Home Secretary that the subject is worthy of his early and serious consideration. This case is not the only one which shows the weakness and inadequacy of the 40th clause of the Medical Act, and which discourages the prosecution of offenders. We are not asking for anything unreasonable. We only ask for a clearer definition of the qualified and the unqualified practitioner respectively—a distinction which it was the very object of the great Medical Act of 1858 to draw—and for greater facilities for punishing those who, by false means, mislead the public as to their qualifications to treat disease. There are those who will follow the advice of the unqualified and whose gullibility seems to be proportionate to the absurdity of the pretensions of those whom they follow. We do not say that any legislation can save such persons from the results of their own ignorance and stupidity; but the State has not yet done its duty in providing by legislation a clear and ready means of distinction between the qualified and the unqualified practitioner, and in deterring the latter from specious appeals to the ignorant and the afflicted.

IT is very difficult to collect definite information about the final results of chronic diseases which are dealt with in hospitals in the earlier and more active stages of their development. In private practice it is often possible to watch a patient for years and follow a case to the end of its course. It is only in hospital practice, as a rule, however, that the number of cases of any given disease is large enough to make deductions from results that will be reliable and will form a guide for future treatment. The difficulty of following the progress of hospital patients is only fully known to those who have attempted it, and we are therefore in the dark on many important points of prognosis. Dr. GIBNEY of New York has made a very praiseworthy effort to trace the history of 499 cases of tuberculous ostitis of the knee which had been under his care prior to November, 1887—that is to say, patients whose treatment was completed by that date. The inquiry lasted for two years, and he succeeded in obtaining information about 300 of these 499 patients. The results are published in the *American Journal of the Medical Sciences* of October, and it is from this paper that we have extracted the following facts.

The disease is more common in boys than in girls, being in the proportion of nearly four to three; but it attacks the right and the left knee in almost identical numbers. Boys are, of course, more exposed to slight injuries and exposures of the

part, which are probably important factors in the localisation of the tubercle bacillus; but the two legs are used so equally that one of them is not more liable to the disease than the other. In 51 per cent. of the cases the disease developed before five years of age, and in 36 per cent. between the ages of five and ten. Of the 499 cases only sixteen, or 3 per cent., had any other bone or joint affected with tubercle, so that the liability to this double arthritic tuberculosis is very small; 46 per cent. of the cases were associated with abscess; 40 of the 300 cases traced died, 6 from tuberculous meningitis, 14 from exhaustive suppuration, 2 from amyloid disease, 3 from phthisis, 2 from dysentery, 1 from shock following excision of the knee, and 12 from intercurrent affections not connected with the disease. Dr. GIBNEY considers that only 22 of these deaths can be attributed to the disease itself, but we think that this is too low an estimate; the cases of phthisis and dysentery—possibly tuberculous ulceration of the intestine—certainly ought to be added, and also, we think, the case of death from shock. If these are included the mortality due to the disease and its treatment is 9·3 per cent. The average duration of the disease was from three and a half to four years.

All the cases were subjected to one of three kinds of treatment—namely, the expectant, the fixation, and the protective. By the expectant is meant the treatment of symptoms as they arose and the irregular use of apparatus; 71 cases were treated thus, of which 3 died, 5 came to excision and 3 to amputation, and 60 remained with fair results. Of these 60, 37 had no abscess; 44 recovered, with more or less motion, while 16 had no movement at the joint. By the fixation treatment is meant the continuous use of some form of apparatus to immobilise the joint partially or completely—e.g., a plaster-of-Paris bandage. In 190 cases this treatment was adopted throughout. Of this number 35 died, 20 deaths being traceable to the disease itself; 9 came to excision and 1 to amputation; and 145 remained "with more or less fair results"—63 of these had abscesses, while 82 had been without them. Again, 113 of these 145 cases had motion in the joint, and 32 were completely ankylosed. By the protective treatment is meant the use of an apparatus to prevent all concussion and jar. This is the treatment formulated by the late Mr. H. O. THOMAS of Liverpool, and the splint known by his name is the one chiefly used by Dr. GIBNEY Thirty-nine cases have been subjected to this treatment, of whom 2 died from causes quite independent of the disease in the knee, and 37 recovered with good results. Of these 37 cases, 19 had abscesses, and 18 had not; all the latter recovered with a movable joint, and only 3 of the cases with abscess ended in complete ankylosis. The results of the three methods of treatment, judged by the fact of recovery with or without motion, are very striking. Expectant treatment yielded 60 per cent. of recoveries with motion, fixation resulted 76 per cent. of recoveries with movement, and the protective treatment gave 95 per cent. of recoveries without complete ankylosis. We can hardly accept these figures as a final statement on this point, the number of cases treated by the protective plan being far smaller than by either of the other two, and certainly too small to found a safe generalisation upon. Relapse appears to have been a rare incident in these cases; it was noted only ten times in all. Only 36 patients (12 per cent.) were wearing any kind of support when examined for this inquiry.

In 48 cases Dr. GIBNEY made careful measurements to ascertain whether there was any lengthening of the lower epiphysis of the femur, and, adding to these 68 cases carefully examined by Dr. BERRY, one of his staff, he found such lengthening in about two-thirds of the cases, and he also found that it ranged from a quarter of an inch up to even an inch, the largest number of cases showing a difference of half an inch. It is interesting to note that this lengthening was found more often in the cases that had been treated by the protective method than in those that had been left to nature or had been simply fixed. Many of the points brought out in this report are similar to those formulated by Mr. HOWARD MARSH in reference to disease of the hip. As far as they bear on the influence of treatment they show that the best results are to be obtained by the protective plan, that the worst results follow the expectant method, and that the treatment by fixation alone occupies an intermediate position.

No part of the Darwinian doctrine has taken stronger hold or made a more profound impression upon modern thought than the ideas involved in the phrase, "the struggle for existence." Obvious as the leading facts seem to be as revealed by the light of modern research, it is certain that we owe to the labours of DARWIN, WALLACE and their numerous disciples the first distinct recognition of the broad biological law that all living organisms are engaged in a struggle to maintain their own existence and to propagate their kind. The means of subsistence being limited, a struggle ensues for their possession, and the results of this struggle we term "the survival of the fittest." By "fittest" we mean "best adapted to its environment." The term is thus a relative one and has no constant signification. Regarded purely from the biological point of view, fitness means such conditions of structure or function as enable the organism to react to its physical environment, to appropriate suitable nutriment from the elements of food available, and to protect itself against the dangers that menace its existence. So much is clear. It is when we get into the ethical region that difficulties assail us, and it is to this side of the question that we desire briefly to advert. If the struggle for existence be world-wide, if it be waged on purely selfish principles, if the conditions of success be mainly strength and cunning, we are face to face with a conception of the creation from which we may well shrink appalled. Where, we may ask, is there place in such a scheme for justice, for mercy, for sympathy, for love? Happily these principles exist and their range is not wholly confined to the human family. We must pause, therefore, before we accept as complete or conclusive such a conception of biological laws as would seem to exclude any recognition of the higher moral qualities. The very fact that these qualities have arisen and now exist is proof that there is a place for them in the universal plan. Any analysis of these qualities into mere phases of selfishness is as unsatisfactory from the point of view of philosophy as it is repugnant to the unsophisticated feelings of the human heart. These reflections have occurred to us on reading Sir J. CRICHTON-BROWNE'S address on "Biology and Ethics" at Sheffield, with the

general drift of which we find ourselves in much sympathy. "In the case of civilised man," he says, "natural selection is subject to numerous and extensive limitations. The struggle for existence still goes on vehemently enough; but it is changed in character, and instead of animal rapine we have industrial competition. The brutal and relentless acts of self-assertion that in a savage state secured the survival of the fittest—that is to say, of those best adapted to savage surroundings—have been condemned as unsuitable to a more artificial existence, and are punished as crimes, and the conflict is carried on by cunning devices which abolish the weakest slowly and unobtrusively, and do not outrage certain moral feelings opposed to violence which have in the meantime grown up." This is, no doubt, true, but our point is that, if a selfish struggle were a correct and complete analysis of the competition which undoubtedly exists among all living organisms, it is difficult to see how, for example, violence was ever deposed from its place of honour. It might be argued that, in the process of evolution from lower to higher types, it came to be perceived that violence often defeated its own ends, that cunning and foresight were the really important things, and that violence came to be condemned, not *quâ* violence, but simply as a misdirected force. That there is some truth in this view of the case is probable, but it is surely a very inadequate explanation of the honour which we pay to patience, self-control, self-surrender, and love. Again, Sir J. CRICHTON-BROWNE says truly that "in social progress the struggle for existence becomes in certain directions a surrender, not of the feeblest, but of the strongest and the best. A recognition of the obligations which man owes to his fellow-men, and the promptings of 'love's divine self-abnegation,' impose restraints on some of the competitors who, instead of forcing their way to the front, as they are well able to do, stand aside and allow themselves to be beaten by those less fitted to survive." In other words, wherever the moral element appears the struggle for existence is no longer an unrelieved and relentless struggle, but is modified to an incalculable extent by other forces than strength and cunning. The lecturer went on to point out that, "the moment we get beyond the solitary animal, fighting for its own life, mutual obligation or a consensus becomes apparent." The social feelings exist more or less throughout the animal kingdom, and they reach a high degree of perfection even in the case of such creatures as ants and bees. It is evident that these feelings represent a higher phase than the unrelieved individualism which is the first and most obvious expression of the struggle for existence. The benefit of the individual becomes subordinated to the benefit of the community of which he forms a unit. This is a distinct advance, but if progress stopped here we should only substitute class feeling for individual selfishness, and the gain, though real, would be very limited. We need to rise to the conception that man owes obligations, not only to his family, his class, his nation, but to the whole human race. The subject of the ethical bearings of the struggle for existence is, however, too vast to be pursued further here.

DR. HARRY P. MAJOR of Hungerford has been appointed a Justice of the Peace for the county of Berks.

Annotations.

"Ne quid nimis."

QUACKS' ADVERTISEMENTS.

THE subject of quacks' advertisements is one upon which public opinion stands much in need of being both formed and stimulated. For the discredited quack, when once his methods of doing business have been exposed, there is plenty of reprobation, but the prosperous quack appears able to have his own way with the world in a measure which provokes the envy of better men. That the general public should be misled by bold advertisement and ignorant or perhaps garbled testimonials is no matter of surprise and, indeed, is too natural to be even matter of complaint. That a certain amount of quackery should pass muster even with the lay press as legitimate enterprise we can understand. The ordinary newspaper editor or manager cannot be expected to have a very keen perception of the ethical considerations which deter the practitioners of the art of medicine from seeking publicity in the columns of his organ, and he may be pardoned if he sometimes thinks that the use of those columns to make a nostrum known is, from his point of view, a legitimate branch of newspaper business. But, while we are thus prepared to concede every point that can be claimed with even a show of reason by our contemporaries in palliation of what has come to be a serious public mischief, we feel bound to protest against the facilities which they place in the way of some of the worst depredators who prey upon the public. No falsehood is so shameless, no promise so palpable a trap, but it may obtain colour and currency from appearing in the columns of any well-known journal, and it is noteworthy that among the worst offenders in this respect are the religious newspapers, which enjoy with certain classes of the community a high reputation for accuracy and *bona fides*. And even this is not the worst. Regard being had to the lavish expenditure which is bestowed in advertising some quackeries, it must be obvious to those who take toll of the advertisers that they are participators in the proceeds of what is, to say the least, a very questionable traffic. And here we say nothing about those flagrant cases in which an extravagant advertisement is the price of corrupt silence on the part of the press, or even of venal praise. Such practices stand in no need of condemnation, though we fear that they are by no means so uncommon as we would fain believe; but the journalist who would consent to be a party to such a transaction should be punished as a criminal—remonstrance in such a case is idle and may be forborne. There is, however, a large number of cases in which there has been no public exposure of the quackery and no such confession of infamy as is implied in a bribe, in which, nevertheless, the scale and tenour of the advertisement adopted ought to put any sensible person upon his guard. By dealing too complacently with such customers an upright journalist makes himself a party to the most odious and despicable kind of public fraud. The weak, the ailing, and the poor are the chosen victims of the quack. By playing on their fears and taking advantage of their distresses he persuades them to pay exorbitant prices for his worthless goods and battens on the filthiest form of "filthy lucre." Thus does he obtain command of the sums of money which he lavishes in advertisement, and those who cultivate his custom must not complain if they are charged with complicity in his misdeeds. What is even more degrading and should be still harder to bear is the evil conscience which participation in such a traffic involves when once the facts of the case have been clearly perceived and honestly faced. To denounce the

principal culprit is in such a case usually an idle task, and one for which our intimate relation with the profession of medicine, upon which the arts of the quack are popularly supposed to trench, is a positive disqualification. But we hope that by calling attention to the means by which this evil lives and spreads we may do something to detach the more reputable of those organs of the press which an over-easy system of conducting the business of journalism makes aiders and abettors of the quack.

THE APOTHECARIES' SOCIETY AND THE PHYSICK GARDEN.

No proverb is less true than that which attempts to justify the accuracy of vague rumour by allusion to the connexion between smoke and fire, and it is quite possible that those responsible for the financial policy of the Apothecaries' Society have never entertained any project whatever for the sale of their historic inheritance, the Physick Garden at Chelsea, despite the statements that have widely credited them with that intention. At any rate, it is now denied that any such project exists. A contemporary points out that the Apothecaries' Society have no power to sell the Physick Garden. This is not quite accurate, but we can reassure the numerous people who would view the transformation of Sir Hans Sloane's herbarium into Chelsea mansions with but qualified approval—such as the past students of the Garden, the tenants of the neighbouring houses, and the archæologically-minded in the ancient suburb and elsewhere—that their apprehensions need not be very acute, as many formalities have to be gone through before the Physick Garden can become a red-brick terrace. The Apothecaries' Society hold their property subject to certain conditions laid down in the will of the late Sir Hans Sloane, and he has indicated the course which they must pursue in the event of their desiring to dispose of it. They can sell their property, but they cannot approach the courts for the necessary powers or treat with private purchasers without discharging the conditions.

MEDICAL VERSUS LEGAL CORONERS.

A CORRESPONDENCE has recently appeared in the *Western Chronicle* under the heading of "Election of Coroner—Doctor or Lawyer?" A letter signed "Common Sense" shows how large are the discretionary powers exercised by coroners and how important it is, for this reason alone, that every coroner should have had a medical training. The writer quotes figures to show that one coroner held in one year 799 inquests and in 897 cases which were referred to him he held merely informal inquiries concluding that inquests were unnecessary. Moreover, in each of these cases he sent notice to the registrar of deaths that he did not consider it to be necessary to hold an inquest, and also sent him his opinion as to the cause of death. In other words, the coroner, who was a member of the legal profession, decided in 53 per cent. of the cases referred to him that an inquest was unnecessary, and in all these cases comprising the majority of the total gave a certificate of the cause of death. That the training of a solicitor or barrister does not comprise a medical training is well known, and the utter absurdity of anyone who has had a mere legal training taking in hand such purely medical functions is evident. Sooner or later this must become manifest to all city and county councillors. Meanwhile we may point out another fact of great significance, which may even carry greater weight with some councillors than the weightiest reasons in favour of medical coroners. Until the passing of the Coroners' Act of 1892 it was required by the Municipal Corporations Act that the deputy coroner for any municipal corporate town or city should be a barrister or a solicitor. This gave a certain amount of plausibility to the argument that the coroner should be a barrister or a solicitor, though in fact the coroner might be any fit person without being required to belong to any profession at all. The Act of 1892 has, however, changed this, and removed even this flimsy excuse for appointing a legal coroner. Henceforth the deputy-coroner for every municipal town or city may be like the coroner or the deputy-coroner for the county, any fit person, and even those who may not be prepared to go with us the full length of holding that an experienced medical practitioner is the most fit person will hardly deny the fact that he is a fit person. Another very important change brought about by this Act of 1892 is that the deputy-coroner may act after the death of the coroner for a period not exceeding three months. The city or county councillors may also defer the election of coroner for that period. Hence the election of coroner will probably not be in future the very hasty matter which it has been in the past; and the three months' interval will give ample time for fully discussing the claims of medical candidates and for duly weighing their merits against those of their legal opponents. It is with great satisfaction that we notice the candidature of one or more medical practitioners for each vacant coronership. As has been before noticed in THE LANCET the proportion of medical coroners in Ireland is double that of those in England, the proportion in the former being one-third, in the latter one-sixth. Care should be taken that not more than one medical candidate goes before the Council for final election, so as not to divide the votes. The claims of medical candidates are being considered now more attentively than they ever were before, and there was never a more favourable time than the present for the candidature of medical claimants for the office. We hope that every vacancy will have its medical candidate, and that we shall have the pleasure of frequently noticing "another medical coroner."

THE LATE MR. CHARLES JENNER.

How far a life devoted primarily to business may in its after stages prove helpful to science and nobly responsive to philanthropy has been well illustrated by Mr. Charles Jenner, who died on Friday, Oct. 27th, at his residence near Edinburgh. Considerably senior to his distinguished brother, Sir William Jenner, he retired from the commercial career comparatively early and gave up his fine mental gifts and his humanely inspired energies to the acquisition and diffusion of knowledge and to the rehabilitation, material and moral, of the labouring poor. For both objects he drew unstintingly on the ample means he had honourably amassed, and was at once a generous and a judicious giver. He had made himself an authority in more than one field of natural science, and in botany particularly had few equals in its cryptogamic department. The Transactions of the Edinburgh Botanical Society owe several valuable papers to him; while his "Scientific Garden" at Easter Duddingston Lodge, near Portobello, afforded a series of object-lessons in acclimatisation as interesting and instructive as their ornamental "setting," so to speak, was attractive and picturesque. A well-written account of it by Mr. John Lindsay, of the Royal Botanic Garden at Edinburgh, though printed only for private distribution, found its way to many a cultured student whose subsequent visits to the demesne enhanced his admiration of the "Garden" itself and of the learning and liberality of its hospitable possessor But it is as the chief promoter, if not the actual originator, of the "Working Man's Flower Show, with help from Wife and Child," that he endeared himself to the poor "in populous city pent" and gave the solace of acquired and refined tastes to many lives otherwise familiar only with the unlovelier aspects of labour. Of this beautifully humanitarian work we have already given some account,[1] and we have reason to know that the good seed he has sown in the wynds and courts of the

[1] THE LANCET, Aug. 27th, 1892.

"grey metropolis of the north" has been wafted to other centres, there to fructify for the sweetening and the ennobling of the humbler households of their toiling denizens. Nor was it in science only that his liberal and wisely bestowed largess was conspicuous. Fine art, literature, philosophy itself—all, in the persons of their worthier representatives, owed him much opportune and effective encouragement. It was at his instance that the late Mr. Woolner modelled the finest bust yet executed of the late poet laureate—a work of art which, after adorning his own exquisitely furnished gallery at Easter Duddingston, Mr. Jenner, with characteristic liberality, presented to the nation. The local medical school, as not a few of its original investigators can attest, had few wiser or more helpful friends than he; while every charity, particularly those which in their programme included education and the widening of the mental horizon, was indebted to him for ample and steady support. Charles Jenner, an Englishman by birth, a Scotsman by early association and after life, was an embodiment of the intellectual and moral forces which have made our Anglo-Saxon civilisation what the world recognises it to be—an influence for the elevation, refining, and ennobling of our common humanity, chiefly through those studies and recreations which have nature for their subject matter and science for their guide.

FEMALE PHARMACISTS.

AN editorial note in a contemporary which is largely devoted to female interests urges the advantages of pharmacy as an occupation for women, and instances the need of great neatness, manual dexterity, and a fair amount of patience. The cost of training, examination fees, &c., is estimated at from £150 to £250. Whether a fair return for this outlay can be found at present is another question. It is stated that there are ten or twelve women now on the Register of the Pharmaceutical Society of Great Britain, the greater number of whom are in business on their own account, but some hold appointments as hospital dispensers and some give private lessons. It is also suggested that there should be a good opening for female pharmacists in India. Perhaps the strongest arguments against the development of this profession in this country lies in the natural feminine tendency to "give advice," especially in medical matters, and in the fact that amongst the lower classes it has become a common practice to "ask advice," not only for children's ailments, but also for many illnesses which may be trivial in their commencement, but become serious if wrongly treated. The editorial paragraph in question thinks that "unpleasantness" need not be feared if in undertaking duties in a chemist's shop, the work could be confined to the preparation of medicines. Unfortunately there does not appear to be much opening for assistants who would object to serving behind the counter, and, on the other hand, the women who are in business on their own account must always have qualified male assistance, or else they must be prepared to come forward whenever any poison is purchased.

PACHYMENINGITIS CHRONICA EXTERNA.

IN the last number of the *Journal of Pathology* Dr. Alexis Thomson describes two specimens of this rare condition. The first was found in making an examination of the body of a child five years of age who had died of abdominal tuberculosis, and who had also suffered from ulcerative endocarditis. There was no sign or history of either rickets or syphilis. The dura mater was found to be adherent, so that it was necessary to remove it and the skull-cap together. On holding this up to the light two bluish-black areas were visible of considerable size, one on each side in the situation of the parietal eminence. That on the right side was the larger and was 7 centimetres long and 3·5 broad. The dura mater, on being torn off, presented a uniform layer of red sprouting granulations, and the inner surface of the skull showed the opposite condition—viz., an infinite number of grooves and pits in which the granulations had been imbedded. These pits were quite different from the large smooth-walled ones which usually accommodate Pacchionian bodies. The arachnoid, pia mater, and brain itself were all normal. The second specimen is from the Anatomical Museum of the University of Edinburgh and is the macerated skull-cap of a child without any history. The outer table is normal, except for the presence of two well-defined bosses a little behind the parietal eminence on each side, resembling those met with in inherited syphilis and rickets; the inner table, however, is the seat of changes exactly similar to those just described in the previous specimen, but more advanced, the parietal bones and the two halves of the frontal bone being symmetrically affected. The condition generally also indicates that the process had become arrested and that repair had set in before death, probably following an involution and obliteration of the granulations from the dura mater. Dr. Thomson regards the condition described as depending upon a reversal of the normal function of the dura mater regarded as an internal periosteum of the skull. It is evidently a rare condition, and its etiology and symptomatology are both obscure. His description of these cases may possibly be the means of directing anew the attention of pathologists to the condition.

THE CARE OF OUR WOUNDED IN WAR.

WE have more than once called attention to the alleged unpreparedness of our Army Medical Service for war service. The subject has been fully discussed in a communication from an officer of the Army Medical Staff to *The Times* of the 1st inst. It seems clear that if matters are in the condition represented—about which there does not appear to be much room for doubt—the military medical service of this country will break down in the field under the strain of war with any European force. An efficient medical service cannot be obtained under a system which does not admit of its being exercised in peace in those duties that must be carried out in war. The War Minister admitted that this was a "weak point"; but it does not seem that anything has since been done to strengthen it. The writer of the communication in question boldly asserts that the medical service is totally unfit for war and backs up his assertion by a number of reasons, some of which strike us as being of a pertinent and forcible kind. We may content ourselves by taking one as a sample. It is pretty obvious that men of the Medical Staff Corps of the physique he describes would be unequal to the hard work of carrying wounded soldiers with their arms, ammunition, &c., on stretchers over rough ground to the rear of a battlefield. The author of the communication evidently writes from personal experience and practical acquaintance with the various points he discusses. Under no circumstances probably would the amount of transport and medical aid be sufficient, after a big battle, to secure all the prompt succour that would be desirable, but it is all the more necessary on that very account that every part of the medical service which is maintained in peace should be well acquainted with its work and with the equipment and appliances which it will have to use. The present outlook in Europe or India is not so satisfactory that we can afford to be unprepared.

THE SEMMELWEIS MEMORIAL.

WE are glad to learn that the members of the Executive Committee of the Semmelweis International Memorial entrusted with the collection of subscriptions in this country and our colonies instructed their honorary treasurer, Dr. Cullingworth, at a meeting on Wednesday last, to forward through Dr. Duka the sum of one thousand florins—about £80—to the Central Committee in Budapest as their first contribution.

to this fund. We hope that a much larger sum may still be collected both from the profession in this country and our brethren in the colonies, who have lately been appealed to by circular signed by the President, Sir Spencer Wells, and Dr. Robert Boxall, honorary secretary. The members of our profession have ever been ready to acknowledge worth whenever found, and we sincerely trust that the memorial to be erected in his native city to the father of antiseptic midwifery may in some measure compensate for the scant acknowledgment of his labour that he received during his eventful life. Any contributions will be acknowledged by Dr. Cullingworth, 46, Brook-street, London, W.

'NOTES ON THE DISEASE CALLED CHOLERA MORBUS OR CHOLERA ASPHYXIA."

WE are indebted to the courtesy of the editor of *The Imperial and Asiatic Quarterly Review* for a proof of an article on this subject published in the October number of that journal. The article in question, which will be of interest to those engaged in any historical study of cholera, forms part of some "Miscellaneous Notes of the late Sir Walter Elliot," and has special reference to the early history in India of the disease called cholera morbus, or cholera asphyxia. The notes begin with an extract from the proceedings of the Medical Board of the Madras Presidency, dated Nov. 29th, 1787, dealing with the alleged appearance of cholera in that year at Arcot. This is followed by some sections referring to Hindu writings in which the disease is supposed to be noticed, to the remarks of the Dutch physician, Bontius, in 1629, to those of Dr. Paisley at Madras in 1774, to the Report of Cholera at Ganjam in 1781 by Mr. Jameson, secretary to the Calcutta Medical Board; by Curtius in 1782, by Dr. Duffin in 1777, and to notices in 1790 of cholera in the Northern Sircars. A short notice is also added giving references to papers by Dr. D. B. Smith in the "Indian Annals of Medical Science," and to Dr. John Macpherson, and other authorities, for evidence to show that cholera manifested itself in 1503 in one of the first campaigns of Europeans in India. With regard to the descriptions given of some of these outbreaks of disease it is, and must always remain, open to doubt whether they really referred to cholera.

THE OPENING OF A SCIENCE LABORATORY AT THE LEYS SCHOOL, CAMBRIDGE.

AN interesting and, from an educational point of view, important ceremony took place on Saturday last at the Leys School, Cambridge, where a science laboratory was opened by Lord Kelvin. A large number of members of the University were present, and speeches were made by Dr. Moulton (the head master of the school), the Master of Trinity, and Professors Jebb, Dewar, Armstrong and Michael Foster. In his address Lord Kelvin insisted strongly on the importance of maintaining both classical and science teaching in the schools, the one branch of study being complementary to the other. As the scientific man could not be regarded as properly educated and mentally trained without a good basis of literary knowledge, so the classical student was no less defective in culture unless he had enjoyed a certain amount of science training; and he ventured to hope that the time was arriving for a royal and easier and more pleasant road to classical knowledge than had hitherto been trodden, which would allow more opportunity to the schoolboy to devote a few hours each week to scientific study and laboratory work. He contrasted the period when he went to the University fifty years ago with the present. Then there was no science teaching at all in the schools and very little in the University; now science was finding its place in the schools, and the appliances and opportunities for its study in Cambridge were second to none in Europe. The opening of this laboratory was an indication of a new era in school teaching. He trusted that the boys would work in the laboratory for themselves, and work hard, for hard work is real pleasure, and the knowledge obtained by it is a possession and a joy for ever, which neither moth can devour nor rust corrupt. The Leys School is a Wesleyan foundation situated in delightful grounds close to Cambridge, and in the eighteen years of its existence it has been most successful. The new laboratory is admirably constructed and equipped for teaching and experimental work in physics, chemistry, geology, and biology, and it is to be hoped that this example of provision for the study of science will be followed in other schools, and that boys will come from them to our universities and our medical schools, not merely with a smattering of the subjects, whether they be classical or scientific or both, but with such good, well-grounded knowledge that they will be fitted to enter upon higher study with advantage. This is the root of the matter. This is the reform that is really needed, without which, whatever our medical councils and our university commissions may do, it is hopeless to expect any great improvement in medical education or any material reduction in the rejections at our examinations. The new laboratory at the Leys School has, therefore, our hearty good wishes in the hope that the work in it may be carried on upon the lines laid down by Lord Kelvin.

CEREBELLAR DISEASE.

IN a recent number of the *Journal of the American Medical Association* Dr. Krause of Buffalo has published the record of a case which he communicated at the recent meeting of the Association. The patient was a man aged thirty-six, whose family history and previous health gave no hint of any constitutional taint. In October, 1892, he sought advice on account of pain in the head, dizziness, and nausea, combined with a peculiar feeling of "being drawn backward." He also suffered from loss of appetite, his gait was unsteady, his tendency being to fall to the right and backward, and there was sugar in his urine. His knee-jerks were brisk, there was no paralysis evident, and he did not complain of his sight, but the eyes were not examined ophthalmoscopically; still there were enough symptoms present to suggest the diagnosis of cerebellar disease—a diagnosis which was confirmed some months later. The right cerebellar lobe was found to be in a cystic condition, the fluid which escaped from it being of a clear amber colour. The whole lobe seemed to be excavated, its remains merely forming the cyst wall. The case naturally suggests whether operation might have been followed by relief. These cerebellar cysts are obscure in their origin; it is scarcely likely that they are all gliomatous or hydatid. The evidence so far seems to suggest at least a possibility that some are simple cysts, and if so, and if their position can be even approximately guessed at, there seems to be no reason why they should not become amenable to surgical treatment.

THE MODESTY OF THE MINORITY.

MANY persons are apt to grow pathetic over the "rights" of the minority; but to judge from a charming effusion in an American publication, the *Eclectic Medical Journal*, pathos may be spared and pity may be wasted where the sense of superiority is so great. The account purports to be upon a case of "uterine hæmorrhage" in an old negro woman who for the greater part of ten months had been kept to her room and her bed. What she complained of we are not told, but she "had three doctors attending her for a month" and rapidly grew worse instead of better. Then she tried the powers of three others; but this time they appear to have been consulted separately, and after "exhausting their medical vocabulary—calomel, blue mass, and opium—and knowing nothing else to do, they put her on morphine"....."and as she was suffering a great deal she

wished a great deal of the morphine" (*sic*). Now we get a hint of the nature of her malady. "Her bowels never acted unless she took salts or oil; she had no appetite, was having severe uterine hæmorrhage daily, was so weak she could scarcely speak above a whisper, was greatly emaciated, and *nearly dead in every respect*," whatever that may mean. Still, "time rolled on" and "her condition continued to grow worse," even though she was so "nearly dead in every respect" before. Of course, in the moderate language of the narrator, "she became disgusted with the infernal ignorance and malpractice of the attending quacks," and then, providentially, "hearing that *I* had just returned from college, *I* was called in." We must not disclose the nature of the remedies employed, or we may be charged with advertising "eclectic remedies." It must suffice to say that though "I, of course, couldn't promise a 'cure,' I gave" three separate bottles of medicine, one for the hæmorrhage "every three or four hours," another for constitutional treatment "before each meal," the third for her nervous spells "every hour." No wonder that on the third day (was this in compliment to the three bottles?) "she showed convalescence in every respect." "*I* saw her yesterday and she looks as if she might last for several years to come." This interesting account finishes with the following modest flourish: "My practice is good. I haven't lost a patient, and don't ask the allopaths any odds. We have eleven of them here, and no eclectic except Dr. ——; but we don't take any back seat because they are in the majority." Truly the writer must be a pleasant man for the "majority" to have in their neighbourhood.

FAILURE TO CONVICT UNDER THE POISONS ACT.

A POINT of extreme importance in connexion with the section of the Pharmacy Act dealing with the sale of poisons was decided in the Court of Appeal on Tuesday last. Some time ago an action was brought by the Pharmaceutical Society against a seller, who is not a qualified chemist, for penalties for keeping open a shop for the retailing, dispensing, or compounding of poisons—to wit, a preparation of morphine called licoricine. The defendant keeps a shop classed as a drug store in Manchester, where a bottle of licoricine was asked for and bought by an officer acting under the instructions of the Pharmaceutical Society. On the bottle was a notice to the following effect: "This preparation contains the properties of licorice root, chlorodyne, &c., and to ensure its careful use according to the printed directions the Pharmacy Act, 1868, requires it to be labelled 'Poison.'" On analysis morphine was detected, but the actual quantity was not estimated, the analyst stating that there was more than a mere trace; there might have been from $\frac{1}{10}$ gr. to $\frac{3}{10}$ gr. per ounce in the bottle. He was not prepared to say whether the taking of the whole contents of the bottle would do an adult any harm. The county court judge gave judgment for the defendant, as he did not consider that the evidence as to quantity was sufficient to justify judgment for the plaintiff. A case which was decided recently was cited, in which, however, there was evidence that there was sufficient morphine in the bottle sold to kill an adult. The court dismissed the appeal, Mr. Justice Wright remarking that there was no evidence as to quantity and that it would be an abuse of language to say that the licoricine was shown to be a preparation of morphine. Mr. Justice Charles concluded in similar terms, observing that, on the evidence before them, they could only agree with the opinion of the county court judge. This decision, we venture to think, is unfortunate, since it will probably lead to intricacies and tend to hinder the beneficial working of the Act. The Act, it is true, stipulates nothing about quantity, but the fact of a preparation containing a poison at all should afford abundant ground surely for the prevention of its indiscriminate sale. If a preparation contained arsenic—e.g., in such proportion that in a bottle there was present, say, half the fatal dose—it is obvious that a person intent on procuring a dangerous quantity could do so by purchasing an unlimited number of samples. As a matter of fact, in the case above mentioned the preparation was labelled "poison" admittedly to "ensure its careful use," and subsequent analysis disclosed the presence of the scheduled poison morphine. The total quantity, however, was not stated, being presumably less than a poisonous dose, whence it was inferred that the preparation as generally sold could not be productive of harm. We repeat that the mere presence of a poison in a preparation should for many reasons be a bar to its indiscriminate sale, or else the provisions of the Act will to some extent be paralysed and the mischief against which its provisions were intended to operate will be increased. It is difficult to draw a sharp line distinguishing between quantities which are fatal and not fatal, and to insert a section in the Act making a provision of this kind would be utterly impracticable.

ACETANILIDE AS A SURGICAL DRESSING.

IN the *Philadelphia Medical News* Dr. Francis W. Harrell calls attention to the excellent results which he has obtained from using acetanilide as a dressing for wounds. He was led to try it first from a consideration of the fact that several of the coal-tar products are of the nature of good antiseptics. The first case in which it was tried was an extensive laceration of the skin and muscles of the lower part of the arm and forearm in a lad aged nineteen. The surfaces were first carefully washed with warm water and then powdered with acetanilide. There was at first a very slight degree of irritation, which disappeared in a few minutes, and this Dr. Harrell has found to be the usual effect. At subsequent dressings no pus was observed, and the wounds gradually became smaller and ultimately completely disappeared. In other cases similar success has attended his use of this substance, and it is to be hoped that the experience of others will confirm these results. There seems to be no danger from absorption, and large quantities may it is said, be used locally without any risk.

THE INFLUENCE OF SURGERY ON MODERN OBSTETRICS.

A PAPER on this subject appears in the September number of the *Journal of Surgery, Gynæcology, and Obstetrics* by Dr. Thomas Opie of Baltimore. He is of opinion that from the earliest times there has always been a close relation between midwifery and surgery. The department of midwifery was then entirely in the hands of women, and it was only when the lying-in woman was in a desperate condition that male assistance, generally of a more or less directly surgical nature, was called in. The invention of the midwifery forceps in the seventeenth century marked an epoch in the history of obstetrics, and at the same time enormously increased the number of cases in which the use of instruments—that is to say, assistance of a surgical nature—was indicated. The field of obstetric surgery has similarly been widened in our own time by the success of the modern Cæsarean section and of modern symphysiotomy, a success largely due to strict adherence to antiseptic principles. In this connexion we may recall the testimony of the late Dr. Matthews Duncan, who dedicated one of his books to Sir Joseph Lister because by his work on antiseptics he had "done more for lying-in women than any obstetrician." Dr. Opie recognises three periods in tracing the relation between obstetrics and surgery. The first was the destructive epoch, when craniotomy was the chief operation for which instrumental assistance was employed; the second was the reactionary period, when the pendulum swung too far in the other direction and obstetric surgery was almost obsolete; and the third period

was marked by the introduction of the forceps. We may, perhaps, be allowed to add a fourth period, which may be called "the antiseptic period," being characterised, not only by the greatly increased success of the old operations when performed in accordance with antiseptic principles, but also by the increased safety with which a woman may pass through a normal labour if those principles are faithfully and intelligently adhered to. Just as the surgeon has to consider and provide for the absolute cleanliness of himself, his patient, his instruments, and his assistants, so in a case of labour, as Dr. Opie very rightly insists, it ought to be the first practical consideration to secure the absolute cleanliness of all those concerned in the case, as well as of all instruments and appliances. The need for asepsis concerns the monthly nurse nearly, if not quite, as much as the obstetrician. We observe one reason here given for the fact that so many nurses fail in their appreciation of the importance of antisepsis which is often lost sight of. It is that it often happens that a particular nurse works with many practitioners whose methods may vary widely. Some—we trust a vanishing minority—ignore the use of antiseptics altogether; some, again, use one antiseptic, others another; some use antiseptic douches after delivery, while others do not. It is not to be wondered at that an imperfectly educated woman under these circumstances should at times be led to conclude that the whole business is only so much fuss and worry, and may be safely disregarded in the spirit, if not in the letter. Much of Dr. Opie's paper is taken up with the precautions to be taken and rules to be observed in the application of the forceps, and especially he gives a note of warning against the use of the forceps when the cervix is not fully or at least sufficiently dilated—a fertile source of serious danger both immediately, as well as during the lying-in period and afterwards. As Dr. Opie says, "it is a great gift in an obstetrician to be able to wait and do nothing. The obstetrician who is inappreciative of nature's power and ingenuity, and will not give her time in labour, has great need for the surgeon and the undertaker."

THE UNIVERSALITY OF SCIENCE.

LAST week the Société de Chirurgie celebrated their jubilee with a dinner at the Grand Hotel, Paris, at which Sir Spencer Wells was a guest and in his character of English Corresponding Member was made the object of a flattering toast In the course of his reply to this attention, he made use of the following expression:—"Le nom d'étranger doit être banni de la science, qui n'est étrangère à rien et ne connait pas de frontières en ce qui concerne en particulier la chirurgie française et la chirurgie anglaise." This testimony to the fact that the laws of science can have no local limits may seem to be unnecessary, as bearing witness to what is generally acknowledged; but in the case of surgery—the particular science to which reference is made—this universality is not so freely admitted. It is, of course, of the very essence of science that her principles should be universal in their application and independent of geographical or racial conditions. Art may be strongly influenced by national trend or political phase, as is manifest from the most superficial comparisons of the literary and artistic productions of different nations, and of these again at different epochs; but over the truths of science these variations of physical and ethnological environment can have no influence. What is true because it can be verified by actual experiment or because it can be deduced directly from a verified fact by a logical process of analogy—these things make up science and are necessarily as true for one nation as another, as true for a republic as a monarchy, and for a black man as for a white. Yet while we all allow that chemical truths must be the same in Germany as in Japan, and that the laws of gravitation are identical in France and San Francisco, we still talk of this and that school of surgery in a manner that might lead the unobservant to think that some fundamental differences existed in the principles of the various schools. This is the misconception that Sir Spencer Wells's dictum should clear up. To scientific facts there can be no variants. Where nations and schools diverge, and can yet maintain an equal claim to be right, is in their deductions (when these have been made by methods open to human error) and in their consequent courses of procedure. In earlier times—when the proven facts were few and the deductions many, and, for that matter, flighty—the teachings of different schools grew very far apart; but as more knowledge passes by experiment over to the region of fact the various systems of teaching approximate more and more, until geographical limitations to unanimity are seen to be wholly artificial. And at no time in the world's history has this approximation taken place more rapidly than during the last twenty-five years, so numerous have been the facts that have been added to the science of surgery.

BACILLUS PYOCYANEUS PERICARDITIDIS.

IN the *American Journal of the Medical Sciences* for October Dr. Harold C. Ernst, of Harvard University, publishes an account of a bacillus found in the fluid removed by Dr. Shattuck from a case of pericardial effusion. The clinical features of the case were very interesting, and this side of the case will be presented by Dr. Shattuck. The fluid was sent to Dr. Ernst for bacteriological examination, and he found in it a bacillus which he believes to be different from any hitherto described. It is found in the cells of the fluid. When cultivated it produces a bluish-green colour, which in old cultures changes almost to black; acids turn it red, and alkalies change it to bright grass-green. Careful comparisons with Gessard's bacillus pyocyaneus and with P. Ernst's bacillus β showed it to differ from each of these so constantly as to justify its separation from them and its distinctive name.

THE DISINFECTION OF BALLAST.

DR COLLINGRIDGE, in his half-yearly report for the Port of London, refers to the very interesting but admittedly difficult question of the disinfection of sand or water taken in as ballast from infected sources—such, for instance, as the River Elbe. That, theoretically, these materials may convey the comma bacillus would certainly appear to have been placed beyond the region of doubt, more especially as we are assured on reliable authority that this bacillus was found to survive in the water of Marseilles Harbour for eighty-one days. Up to the present, however, no orders have been issued by the central authority upon the subject, and it must be admitted that there are almost insuperable difficulties in the way; especially is this so when a general view of the question is taken, and regulations have to be framed applicable to the varying conditions of the harbours, anchorage &c. to be found in the several ports throughout the kingdom. Although we believe that water ballast may, with the exercise of great care and the use of proper machinery, be gradually discharged and replaced, the same remark cannot be made as to sand ballast, and it would, we think, be a difficult matter to efficiently disinfect a large quantity of this material. In fact, we must confess ourselves to be a little sceptical as to the possibility of dealing with this subject by means of any general order as regards discharge or disinfection of ballast. This being so, we are the more inclined to agree with Dr. Collingridge that instructions might be given to our consuls and vice-consuls to inform the shipowners and masters that ballast taken from infected or suspected sources would be liable to be refused entry to our ports. This course, if it could be properly carried out at places where no official of the class referred to resides, would certainly do something to mitigate the

danger, and would also remove what might otherwise be considered to be a serious grievance by shipowners. It is possible, too, that it may in the future be found desirable to make more use of our representatives abroad for the purpose of notifying the existence of any outbreak of disease in their district.

THE DIFFUSION OF SMALL-POX.

IN the metropolis 30 fresh cases of small-pox came under observation during last week. In West Ham there were 7 fresh cases, in Bristol 10, in Walsall 62, in Birmingham 38, in Aston Manor 13, and in Bradford 23. In other towns and districts infected the new attacks were much smaller in number.

SIR ANDREW CLARK.

THERE has been, we are happy to state, a definite, if slight, improvement in the condition of Sir Andrew Clark during the week. In the light of the opinions formed of the nature and extent of the cerebral lesion it is satisfactory to find that the progress towards recovery has been equal to anticipation. We learn on the best authority that Sir Andrew Clark is regarded as being out of immediate danger, and although so serious an attack as he is suffering from cannot fail to give rise to anxiety there is certainly less ground for it than there was when we last wrote. He has recovered a certain amount of speech, but the paralysis has not diminished.

THE PARLIAMENTARY SESSION.

THE Parliamentary session which began on Jan. 31st and was adjourned on Sept. 22nd was resumed on Thursday, Nov. 2nd, when, all things considered, there was a very good attendance of members. After some questions with regard to Matabeleland had been put and answered the ordinary business of the session was resumed. Mr. Henry Fowler, President of the Local Government Board, moved the second reading of the Parish Councils Bill. In the course of his speech he intimated the intention of the Government to alter the measure in certain particulars. The House of Lords will not resume its sittings until Thursday, Nov. 9th.

CONTROLLABLE BALLOONS.

THE ballooning tragedy at Piedmont, to which we have already referred, will certainly discredit recent attempts to perfect a steering gear that may be of practical use to aeronauts. The dangers that from the first beset this mode of "vicarious progression" were mainly due to the want of control or steering power over the air-ship, so that it was at the mercy of atmospheric currents which wafted it out to sea or brought it into collision with mountain peaks, or, worst of all, which carried it to heights where the cold and the rarefied air subjected the inmates to the severest privations, not seldom causing death. These dangers are said to be in process of being overcome by the construction of "controllable" balloons. Statistics also tell us that sea-navigation has, in proportion to the number of voyages, a more disastrous record to show than air-navigation, but figures can be made to prove anything. Be that as it may, ballooning, according to some enthusiasts, has a great future before it, not only for strategic, scientific, and commercial, but even for therapeutic purposes. This last supposition, though imaginative, may be correct. In cases requiring such pure, restorative air as lies high above the often insanitary and sometimes bacteria-charged atmospheric currents that sweep the earth's crust, a cruise of some days in a "controllable" balloon might conceivably be followed by not a little benefit. The exemption from distracting noises that make life in populous centres so trying in the hyperæsthesia of our overwrought civilisation would add its soothing influence to the pure air. But as yet medical men can hardly recommend the departure. The science of aeronauts does not seem to be equal to the meteorological problems with which they may be called upon to deal, for the unfortunate *aérostier* M. Charbonnet was provided with a steering apparatus, which did not save him from coming to utter grief. And after all the advantages that a patient might gain from an aerial sojourn would probably be as great if the balloon were fixed as if it were floating.

WIDE DIFFUSION OF ENTERIC FEVER.

A VERY wide and even exceptional diffusion of enteric fever is going on in a number of our town communities. From West Ham in the south to Bradford, Barnsley, Sheffield, York, and Sunderland in the north, and in Leicester, Norwich, Grimsby, and Nottingham in the midlands and the east, we hear of the disease in epidemic form; and the matter is of the greater gravity because we know that local conditions favourable to enteric fever are also favourable to the spread of cholera.

DEATH OF MR. ARTHUR HENSMAN.

WE regret to record the death, on the 1st inst., of Mr. Arthur Hensman, Lecturer on Anatomy at the Middlesex Hospital. Mr. Hensman, who had been connected with the anatomical teaching in this medical school for upwards of twenty years, was highly and deservedly esteemed. He presided at the annual dinner of the past and present students of the hospital at the opening of the session, and, although his friends have for some time past been concerned at indications of failing health, he had only been confined to bed for about ten days.

THE EDUCATION OF IMBECILES AND IDIOTS.

THE traveller in a mountainous and barren district has frequently occasion to notice how man, in the face of natural difficulties, persists and succeeds in efforts at cultivation. Wherever the scrap-soil of rocky valleys will receive the spade the ground is sown and harvested, and thus many odd corners of tillage lie scattered amid the expanse of stony pasture. Closely similar in character is the work of those pioneers in medical treatment whose field of labour is the well-nigh barren mind of the idiot and the imbecile. We need not remind the readers of THE LANCET that the task of such, though arduous and somewhat unthankful, is not by any means a hopeless one. The experience of such institutions as our own Earlswood Asylum has proved the possibility of imparting not only some degree of bodily and mental vigour but even a certain facility in handicrafts to this afflicted class. Similar efforts in Germany, France, and America have been attended by a like result. Our only regret is that in this country the accommodation available for purposes of treatment, which in this case implies a constant and methodical process of instruction, is far too limited. A reference to THE LANCET of Oct. 8th, 1892, will show that we are in this respect a long way behind the United States. Another matter which deserves especial notice in this connexion is the necessity of providing separately for the regular and careful training, both physical and mental, of weak-minded persons belonging to the more wealthy classes. To some extent such provision has been made—as, for example, in the establishment recently opened at Vitry, near Paris, by Dr. Bourneville, director of the section allotted to weak-minded children at the Bicêtre Hospital. The new establishment is likewise intended for children and, if we may judge by its prospectus and the reputation of its founder, will be administered in a thoroughly scientific manner.

FOREIGN UNIVERSITY INTELLIGENCE.

Pisa.—Dr. Giovanni Battista Queirolo, Professor of Pathology and Clinical Medicine in the University of Genoa, and *privat-docent* in Neuropathy in the same school, has been transferred to the chair of Clinical Medicine in the University of Pisa.

A MEETING of medical officers to life assurance offices, convened by a provisional committee, Dr. Symes Thompson presiding, formed itself into the Life Assurance Medical Officers' Association, whose object is "the discussion of the medical aspect of subjects connected with life assurance, with a view to obtaining increased information and greater unity of opinion." The Association is open to all legally qualified medical men, the subscription being half a guinea. The inaugural meeting will be held on Jan. 31st, 1894, when Dr. Bristowe will read an address. The hon. sec. *pro tem.*, Dr. Glover Lyon, 8, Finsbury-circus, will be pleased to give any information concerning the Association.

THE Surgical Society of Paris held their jubilee on the 25th ult., when Professor Verneuil delivered an interesting address. Advantage was taken of the presidency of M. Majorlin on the occasion to present him with a commemorative medal, the receipt of which he duly acknowledged. Subsequently the Secretary-General of the Society read a communication in which he traced the history of that body from its inception to the present time. In the evening Professor Verneuil presided at a dinner held at the Grand Hotel, which was numerously attended.

THE medical officers attached to the Russian fleet were not overlooked on the occasion of the late visit to French waters, but participated in the exuberant hospitality of our Gallic neighbours by the provision of a sumptuous banquet given in their honour.

AT the meeting of the International Medical Congress, which is to be held at Rome next April, it seems likely that a proposition will be made to hold the twelfth meeting of the Congress in the capital, or some considerable town, of Russia.

M. PASTEUR, on the occasion of his jubilee, will be presented by the Municipal Council of Paris with an album containing an address the ornamental part of which is being executed by Ernest Guillot.

ON the recommendation of the Public Control Committee of the London County Council, the salary of Dr. R. Macdonald, Coroner for North-East London, has been raised from £999 to £1401 6*s.* per annum.

AT the graduation ceremony held in the Examination Hall at Edinburgh on Saturday, Oct. 28th, forty-eight gentlemen received the degrees of M.B., C.M.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At the first meeting of this Society, held on Oct. 25th, Dr. Robert Barnes was unanimously elected the honorary President. The other officers for the ensuing session are:—President: Robert Pollok, M.B. Glasg. Senior Vice-President: Thomas Richmond, L.R.C.P. Edin. Junior Vice-President: Robert Kirk, M.D. Edin. Secretary: J. Nigel Stark, M.B. Edin. Treasurer: Alex. Miller, L.R.C.P. Edin. Reporting Secretary: Robert Jardine, M.D. Edin. Pathologist: A. Milroy, M.D. Durh. Members of Council: Wm. Cullen, M.B. Edin.; J. K. Kelly, M.D. Glasg.; Malcolm Black, M.D. Glasg.; E. H. L. Oliphant, M.D. Edin.; A. Richmond, M.B. Glasg.; and D. N. Knox, M.B. Glasg.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

FOR the information of those who may be making a study of the present epidemic of cholera it will be well to call attention to the late Mr. Netten Radcliffe's narrative of the invasion of Europe by cholera from 1865 to 1878, in two reports to the Local Government Board, presented to Parliament in 1875 and 1881 respectively, and to other official papers which have since been published, affording a sketch of what has taken place subsequently in connexion with the history of quarantine, international boards, and international sanitary conferences.

Adverting to the occurrences of 1883–84, we may usefully recapitulate some of the salient points in the history of the cholera epidemic at that time. The existence of an outbreak of disease at Damietta was first made known at Alexandria in June, 1883, and a medical commission which proceeded to Damietta pronounced it to be undoubted epidemic cholera. The disease subsequently spread through Egypt. It naturally excited great alarm in the European States, and rigid quarantine measures were adopted in Turkey, Italy, France, and other countries, but the English Government of that time incurred no little ill-will by not coöperating with the other powers in agreeing to and following the measures they had adopted. This country followed, in effect, the views regarding quarantine expressed by Sir John Simon in 1875. Damietta, be it remarked, is a port at which neither the Peninsular and Oriental steamers, nor Her Majesty's troopships, nor any of the ordinary steamers ever call. If the disease had been imported, as alleged, from India, it is only reasonable to suppose that it would have started at Suez, Ismailia, or Port Said, seeing that it was demonstrated by after events that there was nothing in any of those places to prevent the occurrence of the disease there.

In the course of June, 1884, cholera broke out at Toulon and Marseilles, and within French territory it raged principally in these two towns. Towards the end of July Italy was invaded; the first place to be attacked was Spezia, between Genoa and Florence, and Naples also suffered greatly. Rome did not suffer; an isolated case occasionally occurred there, no doubt, but the disease took no root in the capital. The immunity of Rome was in all probability then due to its abundant supply of good water and excellent sanitary arrangements generally, a view which a repetition of its relative immunity in the present epidemic greatly corroborates and strengthens. The history of cholera in Southern Europe in 1884 strongly illustrates the dependence of the disease upon local sanitary conditions. The epidemic subsequently extended to Spain. The most rigid system of quarantine and military cordons was adopted in these countries at ports and cholera-stricken localities without avail; indeed, arrivals from French ports continued to be subjected to a prolonged quarantine in Italy, notwithstanding that Italy herself was in a worse condition than France from cholera. Several questions were asked in the English Parliament as to the precautions adopted against a possible invasion, but no change took place in the policy of this country. It was believed that the experience of 1884 had shaken the confidence of continental nations in the old methods; and to a certain extent this was no doubt the case, especially as regards France, Germany, Italy, and Russia.

It is a curious fact that at the present time we hear of complaints from Constantinople about the quarantine regulations not being sufficiently strict and severe, and that they are not enforced with sufficient vigour. There is no doubt, however, that these regulations have been very rigidly enforced in Turkey, notwithstanding which

a very severe outbreak occurred in a lunatic asylum near Scutari, together with a few cases in the vicinity of the Bosphorus; still, comparatively, the epidemic has spared Constantinople, which has been, and still is, healthy. While the belief on the part of the Porte in the efficacy of quarantine to keep out cholera is so strong, and urgent representations are made to the sanitary board at Constantinople to exercise an increased vigilance in this respect, the European Powers may fairly point to what has recently taken place at Mecca in connexion with the late pilgrimage. It seems amazing that such a condition of affairs, such a hotbed for the breeding of cholera, should continue to exist in this part of the Turkish dominions. The disease was most probably imported, as has been alleged, by pilgrims into Constantinople, if recently imported at all. But why, it may be asked as a matter of common sense, put a stop to trade and commerce in the Bosphorus and expend large sums of money in vainly trying to guard against the importation of cholera, instead of seeking to remove the cause, so that there should not be any cholera to import? It is in the direction of Mecca and the holy pilgrimages that the Turkish authorities should turn.

With regard to the work performed by Professor Koch and the commission despatched by the German Government in 1883 to Egypt and India, and to the inquiry instituted by the Indian Government which followed it, we are reminded that Professor Klein strenuously opposed, at that time and subsequently, the views put forward by the German *savant* and bacteriologist. He apparently held that, whatever might be the ultimate conclusion as to the comma bacillus, it would be an outrage on common sense to advocate measures against cholera epidemics based on the assumption that this organism causes them; and that, although it was possible that this particular organism, of all those observed in the human body, is the cause of cholera, Professor Koch had not proved it to be so, nor even rendered it highly probable that it is so. At that time Professor Klein also appeared to hold the opinion that no micro-organism present in the body of a person affected with cholera was the cause of that disease, but that this cause must be something produced altogether outside and independently of the body of a cholera patient The cholera evacuations alone, it was held, did not contain the virus either potentially or actually, and that, assuming the cause of cholera to be a self-multiplying living organism, it nevertheless did not necessarily require cholera evacuations for its multiplication or for the creation of the virus. What we are all keenly interested, however, at the present time in ascertaining is—what are Professor Klein's views in regard to these matters now?

There is, happily, not much to be chronicled this week in regard to the progress of cholera. Everywhere the epidemic seems to be declining, although it cannot be said to have disappeared.

From St. Petersburg we learn that the epidemic is decreasing both there and at Moscow, and in the provinces generally. An improvement is also shown in the returns from those governments in which the disease had prevailed with the greatest severity, such as Podolia. The prevalence of the disease is stated, however, to have recently increased in the Crimea, and a number of medical officers and sisters have left Odessa for that place.

The Imperial Health Office, Berlin, announced on the 29th ult. twelve fresh cases in Germany. In Schleswig five attacks took place among the navvies engaged on the works of the canal between the North Sea and the Baltic, some of which have since proved fatal. There are cases also at Zerpenschleuse, Tilsit, Stendal, Potsdam, and Havelberg. Since Sept. 23rd 79 cases and 41 deaths have been registered at Stettin. The latest accounts show that sporadic cases are still occurring at some of these places. Up to the present time there have been 33 cases and 12 deaths at Havelberg.

Reports from Bucharest show that during the last fortnight of October 42 cholera deaths had been registered in thirteen centres classed as infected.

From Vienna we learn merely of the death from cholera of a boatman from Pesth, and we may therefore conclude that if the epidemic has not altogether disappeared in Austro-Hungary it has greatly diminished.

Intelligence from Tunis at the end of last month reported that cholera had broken out at Susa and caused a considerable panic and mortality—twenty-eight deaths were reported on the 28th ult.—together with the exodus of 4000 of the inhabitants, the majority of whom fled to Tunis.

As regards Italy, reports from Rome show that the disease is gradually dying out. It still lingers, however, at Palermo, where 9 fresh cases and 4 deaths were registered on the last day of October. At Leghorn and Messina the disease has apparently ceased.

From Teheran we learn that cholera is practically extinct in the city. The disease still prevails to a slight extent, and in a milder form, in the province of Khorassan. The total cholera mortality in Teheran since Sept. 21st has been about 700.

As regards this country the report is satisfactory. Grimsby has been free from cholera since the 14th ult., and the hospital ship has been docked and the shore hospital closed. The exact nature and cause of the outbreak of diarrhœa at Greenwich Workhouse have not yet been determined. All the patients at present under treatment there are doing well. The disease is not considered to have been cholera, and, apart from other things, the relatively small percentage of mortality to attacks corroborates the correctness of that view.

CHOLERA IN ITALY.

(FROM OUR OWN CORRESPONDENT IN ITALY.)

"RECRUDESCENCE all round" might have summed up the report from the various cholera-visited centres in Italy until the close of last week. For this there were sundry causes to account, differing, no doubt, according to locality and circumstances, but all of them traceable, in the last resort, to the relaxation of existing precautions, the discovery of fresh sources of infection, or failure of some kind in grappling with the conditions that favour the disease. Steady, systematic, organised effort is not a characteristic of Italian policy or procedure in any sphere, least of all in dealing with an insanitary force that has its origin in traditionally bad regulations, that appears suddenly and unannounced where least expected, and that provokingly (to use the colloquial phrase) "never seems to know when it is beaten."

To take Leghorn first. Only now, after more than two months of conflict with the disease, are we beginning to realise the extent to which that seaport literally invited the unwelcome guest. The infected quarters are—(1) the Via della Venezia; (2) the Via San Giovanni; and (3) the Via Sant' Antonio. The first of these is not a really poor quarter. It is occupied by seafaring people, or such as make their living by the sea—fisherfolk, lightermen, bargees, pilots, and such like. Under these, however, there is a lower class, the members of which in good times are fairly well off, but in the late and still continuing depression of trade and the industries that feed it, they are maintained in circumstances unfavourable to health, which, in their case emphatically, means "resisting power." At the best of times, moreover, the houses they inhabit combine every conceivable defect. Externally there is little to remark, except their great height, their very small windows, and their steep stairs. But let us enter one of them. We are at once in a labyrinth to which only years of familiarity can give the Ariadne's thread. Here, for instance, there is a hole in the wall through which you get from the first floor of the house you are in to the landing between the first and second floors of an adjoining one; there, on the other hand, the roofs of a detached pair

of tenements are so close together that you step from one to the other with ease; whole blocks being so interpenetrated with passages and communications, some made expressly, others produced by disrepair, that the walls which should separate then really unite them, till you find your way out as best you can from a sort of human "rabbit warren," lighted in the oddest, most haphazard fashion, which seems built for "evil communications" of all kinds, equally defiant of sanitary inspection or of police surveillance. A malefactor, it is said, who is "wanted" may, the moment he sets foot in the Via della Venezia, "consider himself free," and, so far as experience goes, epidemic disease may say the same. When to this poison preserve be added a water-supply notoriously foul, it may be realised how cholera throve and is still thriving within its precincts, and how the patients treated "at home" in it died, while those who were accommodated in the lazaretto recovered.

Let us leave the Via della Venezia and explore the Via San Giovanni and the Via Sant' Antonio. Every sense, outraged already in the first quarter, becomes literally overwhelmed in the second and third. The interiors of the houses are dripping with damp (particularly in sirocco weather), they are malodorous with the reek of human excreta, and a universal "stickiness" on floor, wall, and roof seems to present the appropriate *nidus*, or rather *matrix*, for bacteria of every kind; foul linen hangs about everywhere, and in your haste to descend the steep, slippery stairs and get out into the open air you are reminded, to your horror, that every landing is a latrine. The inmates, moreover, are in keeping with the houses. Sallow, squalid, clothed in rags, living on black bread or ill-cooked *polenta* (a sort of Indian-meal porridge), and on tripe or *fritto*—that is, offal fried in oil—as a rare treat; they breed like the rabbits—multiplying and replenishing the graveyard. The babies are the pets of the household; after four years of age they become the scapegoats for the ill-humour of the parents; after fifteen they have grown, if males, to be masters or "privileged" men; if females at, and even before, that age to be mothers and not always wives. If I seem to exaggerate I can but appeal to the *Nazione* of the 18th inst., where such details as I have given and others almost too horrible for publication are set forth by its special commissioner. "I have seen," says this gentleman, "entire families sleeping in an attic, in one room, on the bare floor; I have seen a *stabile* (tenement), Via San Giovanni, No. 8, where 500 (yes, five hundred!) human beings are huddled together—a tenement called with grim humour 'il palazzaccio.'" Pity of the profoundest kind—all the more profound that it feels so helpless—wells up from the heart at such spectacles; while everywhere the ear is assailed with the cries or screams of babes or children, the moan or lachrymose whine of women, ragged, gaunt, despairing. "*Fare, fare, fare,*" exclaims the *Nazione*. "Act, act, act." Demolish, dismantle the rookeries, give air, give light, give work or employment, give life. This is Italy's present duty in all her hives of suffering, pining humanity. Nor are these poor outcasts unreclaimable. As I can testify, their gratitude for the smallest help, for a kind word or even look, goes straight to the heart. They pulsate with like emotions to ourselves, and have but to be put in the way of well-doing to play a honest part in the world. But it is sheer mockery to preach at them or preach to them when their whole lives are one long disease, prompting every instinct of escape from its thrall. And yet "Society" turns its back on them until the Nemesis of a cholera visitation reminds it of its neglected duties, and its tardy intervention tides over the crisis—till the next one.

In the Abruzzi there was also a recrudescence of the disease, or rather its appearance in quarters where the conditions favouring it had been characteristically unsuspected. In that province, however, as in Leghorn, probably in confirmation of Professor Tommasi-Crudeli's doctrine that "the candidates" for it having been all picked off the epidemic tends spontaneously to die out, there is a marked decline in the number and the severity of the cases. From Aquila, for instance, for the twenty-four hours ending Oct. 20th no case was reported to the authorities. The other rural centres showed equally clean bills of health, with the exception of Pescina (Avezzano), where there was one patient announced. Further south, from Catanzaro, a town of some 21,000 inhabitants and the capital of a populous agricultural province, we hear of an epidemic of another kind, which has for the last seven weeks been prevalent. Scarlet fever and diphtheria, both of them due to the mediæval sanitary arrangements still doing duty in this so-called enlightened century, have, in Cotrone alone, carried off 400 victims, mostly children. The population is *costernata*, as we read, and no wonder, seeing that the *mezzi sanitari sono insufficiente* (the sanitary means are inadequate).

Palermo would of itself require a letter, furnishing, as it does, an instructive object-lesson in the causation and diffusion of cholera. Its water-supply, as far as nature is concerned, could not be better, the basin in which the city lies being surrounded by hills of magnesian and calcareous limestone, which lower down is succeeded by masses of volcanic tufa. From these heights flow down streams of the purest quality to Palermo; but here the mischief intervenes. Side by side with the argillaceous conduits that distribute this water throughout the city run earthenware pipes for the conveyance of dejecta and waste of every kind, pipes the porosity and disrepair of which lend themselves to the active infiltration of the soil with the deadly matter. Hence the frequency and the virulence of cholera visitations in Palermo. Add to this the failure of the citizens to coöperate with the sanitary authorities—nay, the practical measures they take to thwart the latter. Scarcely is the individual attacked with cholera when the first thought of his family, even before calling in the physician, is to save the bulk of his furniture, effects and wearing apparel, all of which are sent "for safety" to the house of some friend. On his arrival the physician finds only the articles which it has been found too difficult to remove, and the patient in bed, stripped of every garment. Can cholera help diffusing itself with such "friends at court"? No doubt the law can punish such contraventions of its spirit and letter; but in the less favoured classes, where the furniture, including the wardrobe, is almost their sole movable property, the impounding and destruction of these constitute a disaster to be evaded by every subterfuge available. Until the authorities replace the articles they seize the poor householder is not likely to let them work their will on the furniture and the apparel which constitute his domestic all. Accordingly, it is proposed that, in every case where such confiscation and destruction of private property are necessitated by the *salus populi*, the authorities should give a fair equivalent in ready money or in kind for what they remove—an act of indemnity which would put an effective stop to the underhand smuggling away of infected clothes or bedlinen and, with it, to the spread of cholera. "Ma come si fà?" (What is to be done?) exclaims the magistrate or town councillor, already at his wits' end to provide funds for disinfection and the multifarious needs of a municipality in a state of cholera-siege. "Where am I to find the money or its equivalent in goods?" The answer is difficult in the present financial straits of the Italian kingdom. Meanwhile, it is so far satisfactory to note that Palermo, like her sister seaports of the Mediterranean, is marking a diminution in the number and the severity of the cases—probably, as I said before, in illustration of Dr. Tommasi-Crudeli's observation that there are fewer "candidates" to glean from.

Oct. 22nd.

THE MANCHESTER SHIP CANAL.

(FROM OUR SPECIAL CORRESPONDENT.)

III.

WHILE a large proportion of the local authorities concerned have availed themselves of every pretext and every quibble and legal obstacle to postpone the execution of sewage works, a smaller proportion have from the very first sought to do their duty. For instance, the corporation of Bolton have had sewage works in operation at Burnden for many years, and in 1886 they built additional works at Hacken. They have also made arrangements for dealing with the sewage of eight surrounding townships. Again, at Rochdale the greater part of the sewage is thrown on to a farm, with the result of producing a good affluent. At Swinton and Pendlebury the international system of sewage purification is applied, and there are other places that have fairly attempted to grapple with the difficulty. The majority, however, of the seventy local authorities have either done absolutely nothing or are only discussing and squabbling over various schemes. When public bodies set so bad an example, it is not surprising that private individuals or firms have shown themselves to be equally

recalcitrant. A schedule of manufactories on the banks of the river Irwell and its tributaries has been drawn up by Mr. Thomas Jephson, the rivers inspector appointed by the corporation of Salford. It gives the names, addresses, and the nature of work done by 435 manufactories and shows the mode of drainage at each of the works, together with the steps taken for the prevention of the pollution of the streams. Under this latter heading the word "nil" occurs no less than 310 times. Of 435 manufacturers, 310 do absolutely nothing to prevent the pollution of the rivers or streams into which they drain the waste products of their respective industries. Nor must it be imagined for one moment that the remaining 125 manufacturers succeed in abolishing all nuisance; it only means that some efforts have been made. Thus the first case is that of some stone-polishing works. The managers have been warned because the sand runs into the river in spite of the settling-tanks established in a field. Then there are some woollen manufacturers who, though they have sap pits, are described as "badly polluting" the river. Several other woollen manufacturers are mentioned who have settling-tanks that require cleaning out. In some cases the pollution is very bad in spite of the tanks, and the waste waters are not treated at all. Others do not continuously use their tanks. Calico-dyers, cleaners, bleachers, and finishers are of course frequent offenders; and even where settling tanks are employed the pollution is sometimes described as "still bad." Some paper manufacturers, also, although they may have settling tanks, and, in one case, even a cinder filter, are often the cause of conspicuous pollution. Then there are fullers and finishers, tanners, chemical glue and soap manufacturers, warp sizers and dyers, proprietors of indiarubber works, &c., who all contribute to pollute the rivers. Nowhere is the pollution so general as in the town of Manchester itself. In a report issued by the Manchester corporation, dated September, 1891, a list of seventy-one manufacturers is given, and only two of these have made the slightest attempt to prevent the pollution of the rivers. The first is a slack-washer. He uses tanks, but, in spite of this, turns a "thick black mud" from his slack-washing into the river; the other is a bleacher and dyer, who expresses himself ready to do anything that is possible, but in the meanwhile continues to pollute the stream near his works. Of the remaining firms twenty-three are described in the report as contributing "a large amount of pollution to the river Irk" and twenty-five as throwing "much pollution" into the river Medlock. Both these rivers fall into the Irwell at Manchester just before it enters the Ship Canal. The remaining Manchester manufacturers pollute the Irwell itself or smaller brooks that are part of the watershed. All of them desire permission to drain into the sewers, so that the corporation may have the trouble, expense, and responsibility of dealing with their waste products. Many manufacturers have what are called "goits." A goit is an intake of water forming a small canal which winds in and out or goes round the works or mill. In that case pollution is especially difficult to detect. The foul waters being admitted in different parts of the goit, they are diluted by a large volume of water before reaching the river. Among the worst trades are those of calico printers and dyers, who discharge their spent dyes into the rivers. Then there are the fullers, dyers, and finishers, who discharge fat and greasy water derived from the wools. Tanners and paper makers add greatly to the pollution. The latter, by the use of evaporating furnaces, are now polluting less than they did a few years ago; but the makers of coarse, common paper who cannot utilise their refuse throw it into the river. In the same way soap boilers no longer occasion so much trouble, for they are able to manufacture glycerine with what used formerly to be thrown away.

Undoubtedly, if the pollution of rivers had been rendered illegal from the very first, means would have been found to utilise the waste products. As a rule the utilisation of waste products, though entailing outlay and loss in the early stages, generally ends by producing a good profit; but unfortunately so little was done in the commencement to prevent pollution that an impression gained ground that a vested interest had grown up and that a right to pollution had been established. Like the right of way, resulting from long usage, so the right to pollute was asserted. Fortunately such a right does not exist. Pollution has flourished in the past, and it is still continued on a large scale. Even the knowledge that it would convert the Manchester Ship Canal into an open sewer has not prevented the practice. Some nuisances have been abolished, some progress has been made; but this is altogether insufficient to save the Ship Canal. To the shame of the country, this canal will be a sewer, and nothing better than a sewer, when it is opened. In some respects it will be worse than most sewers, for it will not be efficiently flushed, and there will be no current worth mentioning to carry away the filth. Alderman Walmsley, M.R.C.S., in a little pamphlet on the Irwell, quotes Dr. Burghardt's work on the Pollution of the Irwell. It is not a recent publication, but Alderman Walmsley assured me there has been but little change. Dr. Burghardt said: "The river Medlock is nothing more or less than a filthy sewer. It is a burning disgrace to a civilised community to allow such a stream to flow through a town like Manchester in its present condition. The Irk is very little better than the Medlock."..... "From my examination of the river (Irwell) I cannot draw any other conclusion than this, that about one-half of the total pollution before it arrives at Throstle Nest Weir is due to manufacturers' waste waters—in other words, to avoidable pollution." Dr. Burghardt found that during holiday weeks, such as Christmas, Easter, &c., when the mills were not working, the contamination at once considerably decreased, and he concludes by saying: "I know from personal knowledge that the Rivers Pollution Act is an absolute dead letter, not being applied at all on the Irwell, and might never have been passed." This, however, must not be taken as meaning that nothing has been done, but rather that what is done is insufficient. Notices are constantly served on manufacturers to abate nuisances, and various improvements effected, but the progress has been slow and altogether unsatisfactory. In any case, it is only necessary to look at the water, especially that of the Irk and the Medlock, to see how terribly the rivers are polluted—indeed, it seems as if they were not rivers of water but rivers of ink.

Most persons who have visited Manchester have seen the Irwell as it passes under the railway bridge that connects the Exchange and the Victoria railway station. Just by one of the arches of this bridge the Irk falls into the Irwell, and here the two waters can be seen battling with each other and finally mixing together. The waters of the Irk are quite black, those of the Irwell are a dark brown with an occasional tinge of dirty yellow. As the two waters mix, the Irwell assumes a more sombre hue. A little further on, the Medlock joins the Irwell and renders it still fouler; and then the combined filth of the three watercourses falls into the Ship Canal, where the organic contents of the water are further enriched by various sewer outfalls. It will scarcely be credited, but there are actually sewer outfalls in the Manchester docks; it is promised, however, that this abomination will be only a temporary expediency. For years the great town of Manchester itself was the chief offender: its sewers fell into the Irk, the Medlock, and the Irwell; according to the conformation of the soil, the outfall was in the nearest stream, and there were, and still remain, any number of such outfalls. But it is unnecessary to say much about this, for a general scheme of drainage has been adopted. In all directions the roads of Manchester are being torn up, and intercepting sewers are being laid down. At great cost all the sewage will be conveyed to Hulme and there treated and clarified before it is allowed to enter the Manchester Ship Canal. This important work, it is said, will be terminated in a year; in the meantime all the Manchester sewage flows in its crude state into the Manchester Ship Canal.

The effect of this and the other causes of pollution is beyond description. I went to the Manchester Docks at Pomona. Looking at the water from a distance it seemed as if it was raining heavily. This optical illusion was produced by the enormous number of air bubbles bursting on the surface. In some parts of the docks the water was not to be seen at all, it being entirely covered with thick, dirty foam or scum. From beneath this the gases arose and blew the foam into big bubbles. So thick was the material of this foam that some of the bubbles were as large as a clenched fist or even larger. Across the entrance of each dock some wooden planks prevented this foam from floating out into the canal. I was informed by an attendant that the foam accumulated so rapidly that it had to be removed four times a day. A staff of men with boats was regularly employed to skim the floating dirt off the dock water; otherwise this greasy scum would soon rise to the level of the embankment. People might mistake it for earth and thus walk into the water. Though the dock water had been carefully skimmed two hours previously to my

visit, the floating matter in several parts was already so thick that it completely hid the water from view. Outside the docks, in the canal, there was a very slight current; but within the docks the water seemed to be quite stationary. Still there must have been a little movement, for in dock No. 4 I could see the water forcing its way upwards from a sewer mouth which was under the surface. Apparently the only current in these docks is that caused by the entrance of sewage. Thus filled by crude sewage and remaining almost stagnant, it is not surprising that the dock should be foul in the extreme. Never before have I noticed such an amount of gas coming to the surface of navigable water; indeed, the bursting bubbles were so numerous that they actually filled the air with quite a loud noise, like the buzzing of millions of insects. Here and there the smell was very unpleasant; but I have seen water—notably the old port of Marseilles, where the water looked cleaner—where the amount of gas bubbling up was not so great, and yet the odours were more pungent and unpleasant.

On the Salford side the docks did not seem to be so foul as the Manchester Docks; this is perhaps due to the fact that Salford does not throw its sewage into the docks. As already described, Salford has a main drainage system and sewage works at Weaste, some distance from the town down the canal. Here all the sewage of Salford and of Pendleton is received, and should be treated before it is thrown into the canal. On the day of my visit, however, the affluent from the Salford sewage works was very black and gave off a powerful and unwholesome odour. On the other hand, only four of the six settling tanks were then in use, as alterations were being made for the carrying out of new experiments to test the value of the Lockwood system of treating sewage. It would not be fair, therefore, to criticise the Salford sewage works at the moment when, in consequence of these contemplated experiments, they were not in working order. There are from eight million to ten million gallons of sewage received at the Salford sewage works in the course of every twenty-four hours, and from this as much as 240 tons of sludge have been extracted in one day. Large fields are now covered with sludge, which is left there to dry. When the canal is open to traffic it is proposed to place the sludge on boats and send it to sea. Going further down the canal—in fact, I followed the bank as far as Barton—I found the same black, foul stream everywhere. A canal it may be one of these days; at present, I repeat, it is only a sewer. When the works are completed it will be a navigable sewer, but still a sewer. As the ships come in and go out and the lock gates are frequently opened and shut the water will be put in motion and will circulate more freely than it does at present. It will, therefore, be a little cleaner. Then later, when the Manchester sewer works are completed, we may hope for a considerable improvement; but we shall not really have water which, from a health point of view, will be fit for navigation till all the seventy local authorities whose drainage falls into the watershed of the Irwell have been compelled to successfully treat their sewage, and till the pollution caused by more than 400 factories, mills, and works is strictly prohibited. Then the Ship Canal will be safe to navigate, then its waters will be pure, and it will no longer endanger the health of those who live on or near it; but not till then can this great engineering work be considered to be altogether satisfactory. It is well and good to bring ocean-going ships to Manchester—pride may justly be felt in such an undertaking; but humiliation would ensue if the canal proved to be the means of conveying over a large and densely populated district, not only the raw materials and the manufactured goods that represent commercial prosperity, but also the germs and the causes of epidemic disease. Cotton-laden ships will be welcome, but the possible cholera contamination of the canal would be most disastrous; yet while the canal continues to receive crude sewage every form of contamination is not only possible but probable.

FEES UNDER THE NOTIFICATION ACT.

WE have received from Mr. Bruce Allan, L.R.C.P. Edin., L.F.P.S.G., of Falkirk, a letter in which he asks our comments on the following contentions which he is maintaining in a dispute with the Falkirk Burgh sanitary authority and its officials:—

1. That, according to the Infectious Diseases Notification Act, the diagnosis of a medical practitioner cannot be called in question by anyone.

2. That, according to the said Act, the local authority in Scotland have no power to refuse to pay the fee to any legally qualified medical practitioner certifying.

3. That a case of mild scarlet fever may run a very short course indeed, even a few hours, or at most seven or nine days, and leave no trace behind.

4. That a large number of mild cases of scarlet fever occur where it is impossible to detect evidence of it even after a few hours, or two or three days.

5. That scarlet fever, measles, and diphtheria may coexist in one and the same person, or run concurrently through a group of the same family.

6. That the sore-throat of scarlet fever is the first, most characteristic, and most constant symptom of scarlet fever.

7. That there may be scarlet fever without rash or sore throat, the disease being manifested by dropsy only.

8. That desquamation of the skin is only a general result of scarlet fever and is no certain proof either for or against it, as desquamation takes place after other severe diseases.

Our comments on the above are as follow:—

1 and 2. A few months ago,[1] in an annotation under the heading "What is Erysipelas?" we mentioned that a Scotch sheriff had heard evidence from a number of medical men regarding the nature of a disease which had been certified under the Notification Act as erysipelas. He concluded from the evidence that it was erythema and absolved the sanitary authority from payment of the fee. The judgment was not appealed against, and we quote the case merely for what it is worth.

3 and 4. Mild scarlet fever may run a very short course and leave no traces behind. In some epidemics there are many such cases.

5. It was a doctrine of John Hunter that two specific diseases could not run concurrently, but this opinion has now been abandoned, and the contrary view is accepted as correct. We do not recollect any reported case in which three specific diseases are alleged to have coexisted in one person.

6. Sore-throat is a very frequent and universally accepted symptom of scarlet fever.

With regard to the points 7 and 8 the reply must be in the affirmative.

Regarding the dispute to which the above communication refers, we have had sent to us copies of a pamphlet issued by Mr. Allan, and of another, in reply, issued by the local sanitary inspector. They reveal a most unsatisfactory state of feeling in respect of the working of the Notification Act, and there are one or two points to which we cannot avoid calling attention: 1. Mr. Allan reported certain cases as suffering from scarlet fever. Dr. Griffiths, the medical officer of health, visited these cases at the request of the sanitary inspector, and then wrote to the inspector: "I see no evidence of scarlet fever in any of these patients and therefore cannot advise you to remove them to the hospital." But Dr. Griffiths does not appear to have thought it necessary to call in Mr. Allan (by a long way his senior as a practitioner) before arriving at his opinion. 2. The sanitary inspector then, acting on the instructions of the convener of the Public Health Committee, called in two other medical men, Drs. Fraser and Leslie, to examine the same cases. They did so, along with Dr. Griffiths, but, so far as appears from the pamphlets, again entirely ignored the medical attendant who had certified the cases. Any medical man may blunder as to scarlet fever, but the question of diagnosis is here quite insignificant as compared with the question of ethics involved in these proceedings. Very possibly, however, Drs. Griffiths, Fraser, and Leslie may have some explanation to offer. In entire ignorance of the local facts, it seems to us that if Dr. Griffiths, when he saw reason to doubt Mr. Allan's opinion, had called him in for a friendly conference the whole matter might have been settled in ten minutes and a great deal of heartburning avoided. 3. A possible explanation of the deplorable state of affairs indicated in the pamphlets seems to lie in the relationship of the sanitary inspector to the whole business. It was from the inspector and not from the medical officer that Mr. Allan had a letter stating that his diagnosis of a case as scarlet fever was denied. In a letter to the Board of Supervision it is the inspector who gives a certificate of character to the medical officer that he "could not knowingly hurt any man" and discharges his duty "to the letter." Then the medical officer "advises" the inspector as to his diagnoses and as to the propriety of removal to hospital; and the inspector writes various letters to Mr. Allan and others regarding what he calls "scarletina." Similarly the inspector writes to the Board of Supervision as to "what marvellous transformation in the first stages of a fever Mr. Allan contemplates," and later on we learn that the

[1] THE LANCET, June 10th, 1893.

inspector informs the board that certain steps as to isolation had been taken by "Mr. Allan and our medical officer ..... *very much against my will*"! [The italics are ours.] Finally, the inspector publishes a statement of the comparative number of notifications made by all the medical men of Falkirk during the past year. The whole thing is so extraordinary that we forbear comment lest some essential facts may be wanting. But we are surely safe in saying that it is only the medical officer who should carry on correspondence with his brother practitioners regarding questions of medical diagnosis and decide as to admissions from his district to the local fever hospital and as to the sufficiency of steps taken for isolation outside the hospital; and we are equally safe in suggesting that the first step towards peace in municipal sanitary affairs must consist in officials keeping to their own duties, in non-official practitioners refusing to infringe the laws of medical ethics even at the request of a committee convener or an inspector, and generally in the persevering exercise of mutual courtesy and forbearance in all doubtful questions.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Sanitary Condition of the Whitby Urban District, by Dr. MACLEAN WILSON.—Whitby does not bear the test of expert sanitary investigation. Narrow streets and yards so narrow as to be at places only about three feet wide, whilst they are 100 feet long; houses that are ruinous and others unfit for habitation by reason of dampness or want of sunlight and ventilation, and houses half buried in the soil at their backs: these are some of the external features of the old town, which, happily, seems to be avoided by visitors. In the old town decay seems to be in progress; in the newer town these evils have been largely avoided, but a system of sewerage commenced eight years ago is not yet completed. In the summer the water-supply is scarce and has to be turned off at night, and this probably accounts for the retention of wells which need to be abolished. Then, again, no means for isolating first cases of infectious disease have been provided, notwithstanding the repeated advice of the medical officer of health, and the general administration of the Public Health Act by the sanitary authority is the reverse of active. Dr. Wilson's report does not profess to be a scientific one: it has evidently been compiled for administrative purposes, and he very properly reminds the authority that, quite apart from the duty they have towards those whom they try to attract as visitors, a town like Whitby, with a waning trade, will probably find it to its own pecuniary advantage to set its house somewhat more in order. We hope that heed will be given to the advice tendered.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

London Port Sanitary District.—Dr. Collingridge's half-yearly report will naturally be read with great interest by all those connected with port sanitary administration, since it is to be expected that London, with her immense shipping trade and wealth, will furnish an example of efficiency to all other port sanitary districts in the kingdom. That London is alive to her responsibilities may be judged by a statement of the President of the Local Government Board in the House of Commons that "the Port of London sanitary authority is pre-eminently distinguished for the admirable way in which it is discharging its duty." It seems, in fact, that the Sanitary Committee have met in a very liberal spirit the suggestions of their energetic medical officer of health, and two of the weak points which apparently existed—i.e. an inspecting staff not sufficiently numerous, and absence of arrangements for disinfecting articles from infected vessels in the docks—have now been rectified by the representations of Dr. Theodore Thomson of the Local Government Board and Dr. Collingridge. We note, too, that the latter has persuaded his authority to discontinue the charges hitherto made for the treatment of patients in the isolation hospital. During the first half of the present year no less than 8773 vessels were inspected by the officers of the port, and these figures do not include the boarding visits to vessels at Gravesend. Of the above number, 341 vessels were found to be defective in their sanitary arrangements. Dr. Collingridge has done good service in accentuating the principle of medical inspection quite independently of the Customs officers, and when the latter were anxious to discontinue the conveyance of the medical officers in the Customs launch, Dr. Collingridge insisted that either the simultaneous visits must be continued, or medical inspection be made antecedent to clearance by the Customs. As the Customs continued to be opposed to the simultaneous visit the port sanitary authority purchased and fitted up a hulk for the convenience of their medical officers, and engaged a steam tug with a double crew. By these means separate inspection went on until June last, when the Customs expressed their willingness to revert to the original arrangement, and it was finally agreed that the medical officers should be conveyed to the incoming vessels on board the Customs launch. As showing the enormous amount of work devolving upon the sanitary authority, it may be mentioned that during the first six months of this year there were medically inspected 8673 passengers and 34,307 seamen from infected ports, and this exclusive of every case of sickness on any incoming vessel. Arrangements were made for the cremation of all excreta from patients suffering from cholera &c. after mixing them with sawdust and wood wool. In the spring of this year a sanitary survey of all the docks was undertaken, and considerable improvement seems to have resulted therefrom. All the training ships on the Thames are now provided with isolation accommodation with the exception of the *Worcester*, which, it appears, is shortly to be furnished with it.

St. Giles Urban Sanitary District.—This district, which comprises the two parishes of St. Giles-in-the-Fields and St. George, Bloomsbury, has an average elevation of sixty-eight feet above high-water mark. The general death-rates of the three registration subdistricts amounted to 16·7 in St. George, Bloomsbury, 22·1 in St. Giles North, and 31·6 in St. Giles South. The infantile mortality for the whole district was 159 per 1000 births. Mr. S. R. Lovett embodies in his report copies of the rules and regulations concerning the model dwellings for working classes in his district. In all it is a condition of occupation that the applicants shall have been vaccinated and revaccinated, and that they agree to have any cases of infectious disease occurring in their apartments removed to an isolation hospital. There was in February, 1892, a limited outbreak of small-pox in the district, which was supposed to have originated owing to the importation of the disease from Switzerland by means of foreign waiters. The St. Giles sanitary authority recently applied to the Local Government Board for power to include measles in the list of notifiable diseases; but they were informed that consideration of the application would be deferred until the completion of an inquiry which the Board are now making into the whole subject. Considerable activity seems to have been exercised in the St. Giles district last year in preparing for the possible visitation of cholera. Isolation accommodation for patients and their friends was arranged for, and estimates were even obtained for the removal and interment of the dead. A new Washington-Lyons disinfecting apparatus has recently been purchased by the sanitary authority.

Wandsworth Urban Sanitary District.—Within the limits of this large district are comprised the parishes of Clapham, Putney, Streatham, Tooting, and Wandsworth, and it is, of course, to be expected that the death-rates will vary very considerably. That of the whole district amounted during 1892 to 13·4, the rates of the several parishes varying from 12·4 in Streatham to 29·3 in Tooting. These figures do not, however, bear the relation to density of population which might have been expected, since Streatham has 15 persons to the acre and Tooting 10. The infantile mortality of the district varied from 189 per 1000 births in Tooting to 120 in Streatham, and the zymotic death-rate from 3·80 per 1000 in Wandsworth to 1·97 in Putney. As regards diphtheria, it appears that the mortality of the hospital cases was 23·8 per cent., and of those treated at home 23·3. Although these rates are, approximately speaking, equal, there can be but little doubt that those cases treated in hospital are often far more severe than those detained at their homes; and, further, the hospital figures probably include those cases which are practically moribund on their arrival and which have been sent in for tracheotomy. Not only do these cases considerably increase the case mortality of the hospitals, but they materially affect the recovery rate of the tracheotomy cases. The medical officers of health in their general summary of

the district point out, what we have already drawn attention to, that it would considerably facilitate the working of the Factory and Workshops Act if employers were compelled to send periodically to the sanitary authorities lists of the outworkers employed by them. This seems to be a better course than either of the other two suggestions contained in the report under consideration—i.e., either that the sanitary authorities should voluntarily coöperate in forwarding to each other lists of outworkers resident in other districts than their own, or that the Home Office inspectors should periodically examine the lists and distribute the addresses to the proper sanitary authorities.

Poplar Urban Sanitary District.—Mr. Francis Corner, medical officer of health for the southern portion of this district, in commenting upon the apparent failure of existing means to arrest the spread of scarlet fever, points out that the disinfecting apparatus is obsolete and that proper disinfection of patients in the homes of the poor is well-nigh impossible owing, amongst other things, to the absence of all bathing facilities. Mr. Corner thinks that the best way of improving home disinfection is by the appointment of a specially trained woman to the sanitary staff. The subject of the better ventilation of the sewers has apparently been a source of anxiety to the authority during recent times, and the condition of the sewers in this respect appears to have been rendered worse by the cutting-off of some 583 rain-water pipes, which formerly served to relieve the pent-up gases in the sewers. Mr. Corner refers to "sudden and almost fatal seizures which have happened to the sewer men," and we should have been glad had further particulars of these attacks been given. The Public Health (London) Act, 1891, imposed such increased demands upon the time of Mr. Corner that he tendered his resignation in the spring, and Dr. Alexander was appointed to succeed him. Mr. R. M. Talbot, in his report for the northern portion of the district, records two outbreaks of diphtheria in Bow. One of these outbreaks was apparently connected with the Malmesbury-road Board Schools, and, although Mr. Talbot does not regard the water-supply as the cause of the outbreak, he points out that the water is before use passed through filters which were not cleansed as often as was necessary. Mr. Talbot also investigated the water-supply of all the Board Schools in his district, and discovered that in some of those in which filters were used they had not been cleansed for two years.

South Shields Urban Sanitary District.—The appearance of small-pox in this borough last year had the effect of stimulating the sanitary authority to push forward their proposed scheme for erecting a separate small-pox hospital. After the usual difficulty as regards a site two acres of land were obtained, and a corrugated iron structure, lined with match boarding and felt, was erected. Eight cases of small-pox were treated in the Denes Fever Hospital during 1892, and as there were about twenty patients suffering from scarlet fever in a ward within a short distance it is a subject for congratulation that no cases of small-pox occurred there. This was probably due to the very stringent precautions which were taken, and to the fact that the scarlet fever patients were all between two and sixteen years of age, and therefore to a large extent protected by their primary vaccination. Dr. W. H. Turnbull evidently recognises to the full the danger of treating small-pox on the same site as other infectious diseases, and it must be a considerable relief to him to be able to discontinue the experiment in the future. No less than 1396 addresses of persons arriving from cholera-infected ports were received at South Shields during the year, and it appears that about 10 per cent. of these could not be traced owing to errors of address, &c. Dr. Turnbull remarks that frequently as long a period as three days intervened between the arrival of a ship at its destination and the receipt of the addresses at South Shields. There would certainly appear to be some unnecessary delay in these instances, and it would be well if they were further inquired into. South Shields is apparently very much under-staffed, there being but one inspector of nuisances to a population of over 81,000. As Dr. Turnbull points out, there should be at least four.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6414 births and 3622 deaths were registered during the week ending Oct. 28th. The annual rate of mortality in these towns, which had been 18·2 and 18·4 per 1000 in the preceding two weeks, declined again last week to 18·3. In London the rate was 18·0 per 1000, while it averaged 18·5 in the thirty-two provincial towns. The lowest rates in these towns were 10·5 in Croydon, 11·0 in Norwich, 11·1 in Swansea, 12·4 in Brighton, and 13·2 in Plymouth; the highest rates were 21·2 in Birmingham, 22·9 in Wolverhampton, 23·3 in Salford, 25·1 in Newcastle-on-Tyne, and 27·9 in Liverpool. The 3617 deaths included 499 which were referred to the principal zymotic diseases, against 544 and 508 in the preceding two weeks; of these, 110 resulted from diphtheria, 94 from diarrhœa, 71 from "fever" (principally enteric), 64 from whooping-cough, 58 from scarlet fever, 35 from measles, and 15 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Huddersfield, Swansea, Plymouth, Derby and Oldham, and the highest rates in West Ham, Sheffield, Wolverhampton, Blackburn, and Bradford. The greatest mortality from scarlet fever occurred in Wolverhampton and Burnley; from whooping-cough in West Ham and Gateshead; from "fever" in Hull and Sunderland; and from diarrhœa in Wolverhampton, Birmingham, Salford, and Blackburn. The mortality from measles showed no marked excess in any of the large towns. The 110 deaths from diphtheria included 83 in London, 3 in Bristol, and 3 in Manchester. Ten fatal cases of small-pox were registered in Bradford, 2 in London, 2 in Birmingham, and 1 in Bristol, but not one or in any other of the thirty-three large towns. There were 87 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 28th ult., against 79, 84, and 76 at the end of the preceding three weeks; 25 new cases were admitted during the week, against 17, and 12 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 2778 on Saturday last, against 2801, 2785, and 2758 at the end of the preceding three weeks; 401 new cases were admitted during the week, against 316 and 304 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 230 to 277 in the preceding three weeks, declined again to 271 last week, and were 97 below the corrected average. The causes of 67, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, Nottingham, Bradford and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·4 and 18·6 per 1000 in the preceding two weeks, declined again to 18·2 during the week ending Oct. 28th, and was slightly below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·3 in Paisley and 14·4 in Edinburgh to 24·0 in Perth and 24·2 in Leith. The 513 deaths in these towns included 17 which were referred to diarrhœa, 16 to scarlet fever, 13 to diphtheria, 9 to whooping-cough, 8 to "fever," 1 to measles, and not one to small-pox. In all, 64 deaths resulted from these principal zymotic diseases, against 64 in each of the preceding two weeks. These 64 deaths were equal to an annual rate of 2·3 per 1000, which corresponded with the mean rate last week from the same diseases in the thirty-three large English towns. The 17 fatal cases of diarrhœa showed a decline of 8 from the number in the preceding week, and included 8 in Glasgow and 4 in Edinburgh. The deaths from scarlet fever, which had been 11 in each of the preceding two weeks, rose to 16 last week, of which 8 occurred in Glasgow and 3 in Aberdeen. The fatal cases of diphtheria, which had been 12 and 5 in the preceding two weeks, rose again to 13 last week, and included 8 in Glasgow and 2 in Aberdeen. The 9 deaths from whooping-cough showed a decline of 5 from the number in the previous week, and included 5 in Glasgow. The deaths referred to different forms of "fever," which had declined from 17 to 9 in the preceding three weeks, further fell to 8 last week, of which 4 occurred in Glasgow and 2 in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had been 95 and 106 in the preceding two weeks, further rose to 116 last week, but were 22 below the number in the

corresponding week of last year. The causes of 42, or more than 8 per cent., of the deaths in these eight towns last week, were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·5 per 1000 in each of the preceding two weeks, declined to 20·6 during the week ending Oct. 28th, a lower rate than in any week during the current year. During the past four weeks of the present quarter the death-rate in the city has averaged 23·2 per 1000, against 18·2 in London and 17·5 in Edinburgh. The 138 deaths registered in Dublin during the week under notice showed a decline of 26 from the number in the previous week, and included 17 which were referred to the principal zymotic diseases, against 21 and 22 in the preceding two weeks; of these, 8 resulted from "fever," 4 from diarrhœa, 2 from measles, 2 from whooping-cough, and 1 from diphtheria, and not one either from small-pox, or scarlet fever. These 17 deaths were equal to an annual rate of 2·5 per 1000, the zymotic death-rate during the same period being 2·5 in London and 1·6 in Edinburgh. The deaths referred to different forms of "fever," which had been 10 and 9 in the preceding two weeks, further declined to 8 last week. The 2 fatal cases of measles corresponded with the number in the preceding week. The deaths from whooping-cough, which had been 3 and 4 in the preceding two weeks, declined to 2 last week. The fatal case of diphtheria was the first recorded within the city during the past five weeks. The 138 deaths registered in Dublin last week included 18 of infants under one year of age, and 33 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from those recorded in recent weeks. Six inquest cases and 3 deaths from violence were registered; and 53, or more than a third, of the deaths occurred in public institutions. The causes of 11, or 8 per cent., of the deaths in the city last week were not certified.

THE CENSUS OF INDIA FOR 1891.

The completed census of India for 1891 by Mr J. Baines, the Imperial Census Commissioner, seems to be a most interesting State document, according to the long and instructive abstract and description of it recently given in *The Times*. It is to some extent modelled on the lines adopted in the preparation of a census of European countries; but a census of India, with its ethnological, anthropological, demographical, linguistic, and social subjects, presents more varied and interesting matters for investigation, and Mr. Baines has successfully striven to produce a true picture of the Indian populations as they exist. The total population amounted in 1891 to 289,187,316, of whom 287,223,431 came under the census operations. Of the latter total considerably over 221 millions dwell in the British possessions and upwards of 66 millions in the feudatory states. Of the Europeans 85,000 consist of British troops, their families and belongings; 10,500 of civil *employés* and their families, and over 6,000 of railway servants. The numerical disproportion which exists between the native and European population—a mere handful of the latter, as it were, interspersed amid the teeming native population—is well calculated, as the Germans say, to raise the eyebrows of astonishment, and speaks more for the enterprise and governing qualifications of the British nation than any other fact with which we are acquainted in modern history. According to creed, over 72 per cent. of the population are of the Brahmanic religion, 19 per cent. Mussulmans, 3 per cent. of Animistic or aboriginal forms of worship, and 0·80 per cent. are returned as Christians.

The Indian continent comprises only 3 per cent. of the land surface of the globe, but it contains 20 per cent. of the computed inhabitants of the world, and in point of density of population it exceeds that of any other large agricultural country, being computed at the rate of 279 persons to the square mile in the British provinces, exclusive of Burmah and Assam. Mr. Baines, nevertheless, arrives at the conclusion that the soil of India as a whole suffices for the wants of the population, adding, however, that the region of periodic rainfall is not the place for the experiment of how fine the provision of nature can be drawn. The relation of density of population to rain-fall and character of soil in India—a relation which practically means food or famine—is worked out in an interesting way. The population ranges from 310 persons per square mile in areas with 49 inches of rainfall to 54 persons per square mile in tracts having a mean rainfall of 7 inches. The mean rainfall of India, it should be stated, is 42 inches a year. More than one-half of the whole population—viz., 142 millions of people—dwell in tracts having less than an average rainfall of 42 inches a year. Of course these general statements have to be considered together with the modifying influences of particular conditions affecting each tract. India is probably the most married country, and the country of most youthful marriages, in the world; 84 per cent. of the females between 15 and 40 years of age are married, more than double that of European countries. If the resulting birth-rate is high from these youthful marriages, the death-rate in infancy and childhood is very great, and the average length of life is relatively short as compared with Europe, the deficiency of persons of 40 years old and upwards being more than 5 per cent. as compared with the age tables in Europe. The average duration of life in India is a little over 24 years, as compared with nearly 44 years in England.

THE SERVICES.

MOVEMENTS IN THE MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL LYONS and Surgeon-Captains Hosie and Marks, now serving in Bombay, are under orders for England. Surgeon-Captain Dowman has been transferred to Haulbowline, Surgeon-Lieutenant Moore to Fermoy, and Surgeon-Captain Shine to Castlebar. The following officers have resumed their duties on return from leave of absence: Surgeon-Lieutenant-Colonel Bridges, Weedon; Surgeon-Lieutenant-Colonel Ring, Belfast; and Surgeon-Captain Chandler, retired pay, Gosport. The following officers have left Bengal for England: Surgeon-Major Ward and Surgeon-Captains Adamson and Morgan. Surgeon-Major Robertson, late British Agent at Gilgit, has left India for England.

ARMY MEDICAL STAFF.

Surgeon-Captain Duncan, having returned from temporary duty in the North-Eastern Division, is posted to the Medical Division of the Royal Victoria Hospital, Netley; he will resume command of his Company of the Medical Staff Corps.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel R. T. Wright, Civil Surgeon, Shahjahanpur, is appointed to hold Visiting Medical Charge of the Hardoi District, in addition to his other duties, pending the arrival of a Civil Surgeon at that station. Surgeon-Captain J. L. T. Jones, M.B., is appointed to act as Presidency Surgeon, Third District, during the absence of Surgeon-Lieutenant-Colonel G. Waters. Brigade-Surgeon-Lieutenant-Colonel Moore, A.M.S., on arrival from England on fresh tour, has been appointed to the Medical Charge, Station Hospital, Mhow, vice Surgeon-Lieutenant-Colonel Browne. Surgeon-Captain Morris, A.M.S., on arrival from England on fresh tour, has been posted to general duty, Bombay District. Surgeon-Major Peterkin, A.M.S., in Medical Charge, Station Hospital, Indore, has been transferred to general duty, Aden District. Surgeon-Captain Clark, A.M.S., is transferred from general duty, Aden District, to general duty, Sind District. Surgeon-Major Drury, A.M.S., on arrival from England, has been posted to general duty, Mhow District. The following Surgeon-Majors, who have completed twenty years' full-pay service, to be Surgeon-Lieutenant-Colonels: Alexander John Willcocks, M.D., Henry Kellock McKay, and Frederick Robert Swaine, M.B. The following Surgeon-Captains, who have completed twelve years' full-pay service, to be Surgeon-Majors: Louis Tarleton Young, M.D., James Barry Gibbons, Donald St. John Dundas Grant, M.B., and Dirom Grey Crawford, M.B. Surgeon-Captain L. G. Fischer, Civil Surgeon, is transferred from Mainpuri to Budaun. Surgeon-Major J. C. C. Smith, Civil Surgeon, Budaun, is granted furlough for seven months. Surgeon-Major R. James, I.M.S., 3rd Lancers, Hyderabad Contingent, is granted leave for six months (m. c.). Surgeon-Lieutenant-Colonel F. C. Barker, M.D., F.R.C.S.Irel., Medical Officer, Kathiawar Political Agency, is allowed privilege leave for three months. Surgeon-Captain De Lom, A.M.S., to remain in England till March 27th (m. c.).

NAVAL MEDICAL SERVICE.

Surgeon Charles J. Matthews has been appointed to the *Sparrow*, and Surgeon Joseph R. M'Donnell to the *Colossus*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Samuel Butler Mason, 4th Volunteer Battalion, the South Wales Borderers, to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 2nd Lancashire: Surgeon-Major J. Johnstone, to be Surgeon-Lieutenant-Colonel.—*Rifle:* 1st Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Lieutenant A. Ford resigns his commission.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

The following officers have recently passed the proficiency examination conducted by the Army Medical Staff: *Yeomanry:* Surgeon-Lieutenants: Leopold Hudson, F.R.C.S., Duke of Cambridge's Hussars (Middlesex Yeomanry Cavalry); J. H. Waters, M.D., Berkshire Yeomanry Cavalry (at present these are the only two medical officers of the Yeomanry who hold proficiency certificates).—*Volunteers:* Surgeon-Captains: R. W. Edginton, M.D., 1st Worcestershire and Warwickshire Volunteer Artillery; G. F. England, 2nd Volunteer Battalion, the Lincolnshire Regiment; J. W. Rigby, 1st Volunteer Battalion, the Loyal North Lancashire Regiment. Surgeon-Lieutenants: J. B. Berry, 1st Cinque Ports Volunteer Artillery; T. H. Dickson, M.B., 12th Middlesex (Civil Service) Rifle Volunteers; G. C. Cattell, M.D., 2nd Volunteer Battalion Royal Fusiliers; H. Dutch, 1st Tower Hamlets Rifle Volunteer Brigade; W. Duncan Fraser, M.B., 2nd Volunteer Battalion Royal Welsh Fusiliers; G. M. Edmond, M.D., 1st Volunteer Battalion, the Gordon Highlanders; James Mason, 3rd Volunteer Battalion (Princess Louise's) Argyll and Sutherland Highlanders; H. C. C. Shaw, West Middlesex Rifles; I. Scarth, M.B., 2nd Middlesex Volunteer Artillery; F. Croucher, M.B., 2nd Volunteer Battalion, the Queen's Own Royal West Kent Regiment; J. Boyd, 1st (Hertfordshire) Volunteer Battalion, the Bedfordshire Regiment; D. Thomas, M.D., 1st (Brecknockshire) Volunteer Battalion, the South Wales Borderers.

THE LATE BRIGADE-SURGEON-LIEUTENANT-COLONEL S. C. MACKENZIE, I.M.S.

The death is announced, at Darjeeling, of Brigade-Surgeon-Lieutenant-Colonel S. Coull Mackenzie, who had been police surgeon of Calcutta since 1878, and in later years also held the appointments of Professor of Medical Jurisprudence in the local medical college and Superintendent of the Campbell Medical School and Hospital at Sealdah. He joined the Indian Medical Service from the Edinburgh University in March, 1866, and obtained brigade rank in 1886. Most of his service was spent in and around Calcutta. Dr. Mackenzie was incapacitated from work about six weeks ago, and went up to Darjeeling for the benefit of his health. He died somewhat suddenly on Sunday, Sept. 30th.

THE OPIUM COMMISSION.

It is expected that this Commission will reach Bombay early in January. The opium question is naturally exciting attention in India, where it is considered that it is much misunderstood in England. India, moreover, not recognising the necessity of a Commission from England, does not seem to relish the idea of bearing any part of the expenses that will be incurred.

FEES TO CIVIL SURGEONS IN INDIA.

The general question of fees to medical officers in civil employ in India appears to be exciting some attention in that country at the present time. The official notification of the ruling of the Government of India in regard to the fees to medical officers from native chiefs has raised the question as to the expediency of altering the system and amending the rates of payment of civil surgeons of stations at present followed.

A PASTEUR INSTITUTE FOR INDIA.

According to the *Pioneer Mail*, this institute is now within the range of practical possibilities. It is proposed to establish it at some convenient position in the vicinity of Simla, and to fit it with the necessary laboratories, provided with all the latest scientific appliances, together with accommodation for patients, &c. The Government of India has given its approval to the scheme and will, no doubt, afford it some substantial aid. As the object is a most desirable one it is to be hoped that the necessary funds will be forthcoming, for the expenses will be considerable. The institute is not only intended to afford speedy help to persons bitten by rabid animals, thus saving them the suspense and loss of time involved in a journey to Europe, but it is hoped that a number of bacteriological and pathological investigations may be undertaken which will throw a light upon the etiology of some of those diseases which are so common and frequently fatal in an Indian climate.

COBRA POISON.

We lately noticed in the Indian papers that the Bombay Natural History Society has been requested to supply the Director-General of the Army Medical Department with forty grains of dry cobra poison for experimental purposes, and that the Society has expressed its willingness, as far as possible, to collect the required amount and forward it to London.

THE FRENCH FORCE IN DAHOMEY.

Intelligence from General Dodds of the 27th ult. reports that the French troops are moving forward towards Benhanzin's camp in three columns or divisions. The country in rear of the expeditionary force is said to be tranquil, and the troops composing the expedition are reported to be in a satisfactory sanitary condition. General Dodds appears to be a good administrator as well as enterprising commander, and to be fully alive to the sanitary and medical requirements of the force under his command.

PROPOSED MEDICAL CONGRESS IN INDIA.

The *India Medical Gazette* announces that it is proposed to convene a congress of medical men in India during the ensuing, or next ensuing, cold weather, and suggests that the first of such congresses should be held in the capital of India. The idea is that papers on medical, surgical, and sanitary topics should be read and discussed. The work done by the medical profession in India and the tropics is very large and important, and the conditions of life and climate being altogether different from those of Europe should impart a spirit of freshness, originality, and interest to the proceedings. Our contemporary asks those who favour the project to communicate their views in order that preliminary arrangements may be made.

Correspondence.

"Audi alteram partem."

THE TEACHING OF ANATOMY—ITS AIMS AND METHODS.

To the Editors of THE LANCET.

SIRS,—I trust I may be allowed to reply briefly and respectfully to a criticism of some of my views by no less an authority than Professor Macalister. While honoured by criticism—by no means unkindly—of perhaps the greatest of British anatomists, I feel bound, at the present serious juncture in educational matters, and when the General Medical Council seem to be on the point of taking action, to at least call attention to what I consider some errors of doctrine of our leading anatomical scientist.

I will compress in syllogistic form the teaching which more especially appears to me to be wrong. Says Professor Macalister: (1) "Anatomy should enable the surgeon, without hesitation, to put his finger upon, or a needle into, any structure of the body"; (2) "the relations of undisturbed parts are the essence of surgical anatomy"; (3) "the study of frozen sections is the only way of learning relations." These views hold so closely together that, if the first be correct, all three must be; and they are, moreover, so plausible that, even if stated by one of less authority, they would carry conviction to most minds almost without investigation.

The conception put forth by Professor Macalister is not new. It is substantially the same—popular errors are long-lived—with which I was familiar as a student in Paris—that, to the surgeon, the body (to use the metaphor of the day) should be, so to speak, like glass, transparent; that the surgeon should see his way through its various structures much as the somnambulist sees his way in what most people call darkness, much as the diver sees his way at the bottom of the ocean. "The skin," says Professor Macalister, "should interpose no obstacle to the precision of this localisation"; and, by way of illustrating what is meant, the example is referred to of a celebrated anatomist who used, blindfolded, to cut down upon and tie the femoral artery, "even more than once varying the procedure by keeping his back turned towards the subject while operating." Though without

experience as to tying the above particular artery blindfolded, I have this day repeated the procedure quite successfully in the space of three minutes, my back being turned to the subject. This is to me but a single instance, but what is no single instance to me is the ligature, under similar conditions, of the subclavian artery, which most surgeons would consider a more difficult artery to tie than the femoral. This artery I have tied a score of times blindfolded, and would undertake to tie it at any time without in any way seeing the subject.

I submit my experience, not with a view of any personal boasting, but as a first step towards showing that Professor Macalister's views with regard to surgical anatomy are incorrect and exploded. Professor Macalister admits that the power of "visualising things and places" is not given to many men. I would venture to submit that such power is given to no man. It is by a process altogether different that the surgeon seeks and finds the femoral artery, or the subclavian artery, or any other artery or structure whatsoever. The surgeon by no means makes directly for any deep-seated structure. It is by means of successive guides or rallying points, or *points jalons*, as they were first termed by the French anatomists, that the surgeon finds his way through the body to this structure or that. If there is one thing of all others that the teacher of operative surgery distinctly impresses upon the young operator, it is that he should not be in any hurry, or at all anxious, to come upon the structure, artery, or nerve, or what it may be, that he is seeking; that he should control his natural impatience or anxiety as to the success of the search he has undertaken; that he should be careful of, and fix his mind on, one thing only—namely, finding and making quite sure of the several successive guides or rallying points on his way. The position of the operator looking for a deep-seated structure is, in fact, much like that of the legendary explorer lost in a dark cave, whose only means of reaching daylight is his *fil conducteur*; it is much like the position of every one of us in this London of ours when overtaken by a thick fog while crossing a square, and within a few yards perhaps of our own door, in which case we are guided home by a familiar tree or lamp post.

The first position taken up by Professor Macalister involves quite truly the view that it is the relations of the undisturbed—i.e., undissected parts—not of the dissected or disturbed parts, that the surgeon should study; and involves further the view that anatomy can only be studied to advantage by processes, such as freezing, which do not disturb the relations of the parts. "The study of frozen sections is the only way of learning relations." It is but some twenty years ago that frozen sections were first heard of. Were anatomical relations but imperfectly understood by Callender, Fergusson, Wood—to name only British surgeons who are no longer with us? I fear it is a fact that Professor Macalister is wrong as to his premisses, and therefore wrong as to his conclusions.

Just to refer to the *modus operandi*—with which, as above stated, I am familiar—that of tying the subclavian artery blindfolded, I would put the thing briefly as follows: It will be seen that one is guided throughout by what I have called the *de fil en aiguille* principle, as applied here to the sense of touch. Feel for the clavicle and for the hollow above it; the boundaries of this hollow will give you the position of the sterno-mastoid, on the one hand, and of the trapezius, on the other; make your incision between these limits. How deep should your incision be? Think a moment, and you will soon answer this question yourself. The sense of touch, which has guided you as to the position of the incision, will guide you as to its depth—that is, of course, if you are a practical, and not merely a theoretical, anatomist. Cut till you find you have reached loose, soft tissue. This direction is the rendering, in practical terms—in terms of finger sensation—of the classical direction: divide the platysma and the deep fascia. You have now divided the skin, superficial fascia, platysma, and deep fascia, and you find yourself, as above stated, in the loose, soft, connective tissue of the posterior triangle of the neck. Now work your way downwards and inwards, feeling for the scalenus anticus. This muscle will present itself to you in the shape of a somewhat tense and elastic cord about the size of the outer edge of your little finger. It is a structure you cannot miss if you are *digitally* familiar with the part. Having found the scalenus anticus, get your finger on its posterior aspect, and run your finger down till you are in the angle, an angle of some 60°, between the scalenus anticus and the first rib; there, rolling under your finger upon the hard surface of the rib, you will find the artery, as plain and as easy to "pick up" as pennies in your trousers' pocket. If your finger is properly educated you cannot possibly take a nerve instead. In the foregoing *manuel opératoire* I have laid stress upon tactile sensations. I cannot here dilate upon the view submitted; but I would like to put it tersely that the surgeon should have an eye at the tip of his finger. He is of no good as an operator if he has not. In all operations on the deeper parts the *digital* eye is of more importance than the "ocular," if I may thus express myself.

I should like to remark, before leaving this part of my subject, that Professor Macalister has not quoted me fully enough to be, what I should call, quite fair. Professor Macalister admits that I am technically right as to the first part of the statement, which he criticises as to its bearing on the teaching of anatomy, which first part reads as follows: "The plaster-of-Paris models (of the abdominal viscera) do not correspond with what we see in the anatomical subject." But Professor Macalister does not give the second part of my sentence. My sentence, as a whole, read: "The models do not correspond with what we see *either* in the dissected subject *or in the living patient* when, for surgical purposes, the visceral cavities are opened and the organs exposed." Will Professor Macalister deny that I am right as to my second point also? As soon as the abdomen is opened the parts are, *ipso facto*, disturbed. If Professor Macalister does not deny this—as, in fact, he cannot—what becomes of his fundamental contention that the organs must be studied in the undisturbed condition? The fact is that there is no such thing as an undisturbed condition of the visceral organs. They are soft, yielding structures, whose smooth peritoneal covering is intended to allow of their incessant displacement one upon another, and of their constant adaptation in shape one to the other. The varying conditions of the stomach, bladder, intestine, and spleen, each acting upon every neighbouring viscus, have only to be referred to in condemnation of the view of an undisturbed, or, in other terms, fixed, condition of the viscera.

I must conclude. Professor Macalister practically admits that less attention is now given to dissecting than formerly. What does this mean but that a kind of anatomy less useful than what we formerly had has come to the front *pari passu* with morphology and embryology? These sciences do not help men to learn the *technique* upon which practice rests. The principal aim of the new school is to "explain," and to get men, as the phrase goes, to "understand." In so doing it often explains away what is useful, and, for facts, substitutes abstract and one-sided conceptions. It is submitted that in the anatomy for medical men seeing and doing are understanding, and that nothing else is. To my mind, there should be no blackboard in the dissecting-room, and no abstract or "set" demonstrations should be allowed. A good honest dissecting book (no mere cram book) being in the students' hands, all unnecessary assistance on the part of the demonstrator should be deprecated. The demonstrator should first explain to the men how to dissect, and occasionally show them; and at times he should find any small structure for them that they might otherwise miss. But he should make them dissect, and not dissect for them. Definite standards of dissecting should be drawn up, enumerating all such structures as the student may reasonably be expected to find, but which are often passed over; and all dissected parts should be certified as dissected up to such standards. Such was the teaching of the good old time. Teaching then represented a *vis a fronte*. Examinations were then few and far between. The teacher stood high above his men; and, beyond it being his duty to see that their dissections were honestly done, he was in no way responsible for their progress, or apparent progress—i.e., success at examinations. He led the way, always presenting a high standard as to aims and ability. Followed who liked; there was no compulsion; but the majority of the men followed, and followed well. Those who did not got at least good sound principles, which generally bore fruit after a while. Now there are numerous segmented examinations, and teaching has become a *vis a tergo*. When the men are examined too frequently, the more immediate and apparent, though frequently less important, result of the teaching is brought home closely to the teacher, and it is practically the teacher who is examined. His pupils must pass in fair numbers, or it is he who is blamed. The teacher must then endeavour to make men's work "easy" and to push them on by "set demonstrations." He must explain instead of doing. He must draw

instead of showing. *Nolens volens*, he becomes a "coach,"[1] an *employé* paid to get men through their examinations; one soon considered to be in the pay of the men; one whose humble duty it is to obey the constant cry, "Give us a grind on this part and on that"; one who is to be a walking book to save the men the trouble of reading, who is to follow in the fads of the day, who is to be led, not one who is to lead. The rest follows. The high example is lost; the standards are lowered; the floodgates of demoralisation are opened. "Cram" reigns supreme everywhere and from beginning to end, none deploring the course of events more than the most earnest teachers themselves.

I am, Sirs, yours truly,

Oct. 31st, 1893. THOMAS COOKE, F.R.C.S.

P.S.—Would physicians, and those engaged in the onerous duties of general practice, kindly give expression to the degree of importance, or otherwise, to them of a practical knowledge of anatomy? The view is put forward nowadays, loudly and authoritatively, that very little anatomy is wanted except for the pure surgeon, and that to those in other lines of practice physiology is by far the more important science. Is this so, or not? I can only speak, as a surgeon, of the value of anatomy. It is felt that, in the present crisis, the other side of the question should be heard.

WEEKLY DEATH RETURNS.

To the Editors of THE LANCET.

SIRS,—There is no table of the Registrar-General's statistics more often quoted by the lay press than is that which deals with the mortality returns of the thirty-three largest English towns as calculated each week to an annual death-rate per 1000 persons living. In my opinion all mortal statistics are in the present state of science somewhat speculative, but of all the published tables none seem so well fitted to mislead the lay public as the one I have mentioned. In the metropolis, with its teeming millions of inhabitants, a weekly death-rate so calculated may be useful, but in the smaller districts it has no adequate value, and it may be actually injurious. Take this town, for instance, with (say) 120,000 inhabitants; one hundred and twenty deaths in a year will make the difference of one whole number in the annual death-rate per 1000 inhabitants; in other words, between two and three deaths per week will make the corresponding difference in a weekly return which is calculated to a yearly rate as above mentioned; since, however, the Registrar-General inserts in the tables death-rates calculated to one or more decimal places anyone can estimate for himself the scientific or other value to be attached to these figures. Our town has, I believe, within the past eighteen months or so ranged in these tables from 12·0 to 60·0. We have, consequently, had a large experience in this regard; on several occasions we have headed the list of thirty-three towns with the lowest death-rate, and—tell it not in Gath—during an influenza epidemic last year we have touched bottom more than once. The lay press scatter these returns broadcast over England, and nervous people may be debarred from visiting a town whose weekly death-rate has been suddenly raised by the demise, it may be, of a few of the oldest inhabitants. If it is necessary to have a weekly report of the deaths in the thirty-three largest towns, it might be advisable to publish the actual number of deaths that have occurred in each district since the last report; if more information than this list contained was requisite, a second table in parallel columns might show the corresponding average numbers of deaths per week during the past twelve months. Personally, however, I am in favour of not publishing weekly reports.

I am, Sirs, yours obediently,

Brighton, Oct. 28th, 1893. W. AINSLIE HOLLIS.

"SEA VOYAGES FOR THE SURGICAL CONVALESCENT."

To the Editors of THE LANCET.

SIRS,—I read Mr. Hudson's article on the above subject, which appeared in THE LANCET of Oct. 21st, with great interest. I think, however, that Mr. Hudson, when he states that those who write on the subject of the ocean cure do not mention anything about surgical cases, must have overlooked the word "debility," for which most of them recommend a sea voyage. In my work on "Voyaging for Health" I strongly advise sea voyages for all cases of debility, and I certainly mean to include debility caused through suppuration which may have been cured by surgical aid. I entirely agree with Mr. Hudson that no treatment is so beneficial as sea voyages after many surgical operations. I wish I could endorse his opinion that disagreeable smells and disturbances from vibration are things of the past. There has certainly been great improvement in these inconveniences in all modern-built ships, but in most of the old ones, which form the majority, these nuisances still exist. I cannot agree that late house surgeons or physicians, without any practical insight into general practice or any marine training, make experienced ship surgeons, for there is no post where practical experience of general treatment is more required than on board a large passenger ship. I regret to say that the temperatures given in the chart do not at all tally with the temperatures I took during a voyage at the same time of year. The "tropics" must have become cooler and the voyage from the Cape to New Zealand and New Zealand to Cape Horn warmer since I made voyages by that route. I am afraid that you could not afford space for daily temperature, so I only give the temperature at salient points:—

Jan. 12th.—Left Plymouth; beautiful day; temperature 45° F.
,, 17th.—Arrived at Teneriffe; very fine day; temperature 74°.
,, 21st.—Fine day; sea calm; very hot; temperature 84°.
,, 23rd.—Crossed the line; could not sleep for heat; temperature 85°; temperature of sea 82°.
,, 24th.—Still very hot; temperature 85°; temperature of sea 82°.
,, 28th.—Fine day; sea calm; temperature 76°.
Feb. 1st.—Arrived at Cape Town; sea very rough; weather hot; temperature 82°.
,, 6th.—A very cold, foggy day; some snow; temperature 41°.
,, 12th.—Very cold day, but fine.
,, 20th.—Arrived at Hobart Town; very hot in the town; temperature 80°; on board 72°.
,, 24th.—Arrived at Wellington; temperature 74°.
,, 26th.—A most lovely day; very hot; temperature 78°.
March 1st.—Arrived at Auckland; beautiful day; temperature 82°.
,, 9th.—Arrived at Napier; intensely hot; a very high, warm wind; temperature 88°.
,, 21st.—Left Wellington; lovely day; temperature 72°.
,, 22nd.—A rough, cold day; temperature 50°.
,, 25th.—Awful day—wind, rain, and snow; vessel rolling fearfully; temperature 42°.
April 1st.—Very cold wind; some snow; temperature 37°.
,, 3rd.—Passed through the Straits of Magellan; very cold and dull.
,, 7th.—Much warmer; temperature 70°.
,, 9th.—Temperature in my cabin 80°.
,, 10th.—Could not sleep on account of heat; temperature 85°; temperature of sea 80°.
,, 11th.—Arrived at Rio de Janeiro. Heat intense; yellow fever rampant (200 deaths a day); temperature 86°.
,, 14th.—A regular boiling day; no breeze; temperature 86°.
,, 15th.—Still hotter; temperature 87°; temperature of sea 83°; temperature in cabin 94°.
,, 16th.—Temperature in cabin at midnight 90°.
,, 18th.—Heat very great; temperature about the same; crossed the line.
,, 20th.—Much cooler; temperature 80°.
,, 27th.—Arrived at Teneriffe; temperature 74°.
May 3rd.—Arrived at Plymouth; fine day; temperature 61°.

Although I consider the round voyage to New Zealand an excellent one for many cases, great care must be taken that no disease in an inflammatory condition should be sent this voyage, and physicians should not lose sight of the fact that the changes of temperature are very great in the different latitudes which vessels on this route pass through. I do not consider that an opinion can be formed regarding the merits of a voyage without carefully going into the history of the cases. A well-travelled medical man can at once judge the temperature of any place by the latitude and season of the year, particularly if he is acquainted with the trade winds.

[1] The metaphor is a good one: "Men are to be picked up on the road and carried on *passively* to the goal."

I must confess, in conclusion, that I place no more reliance on the temperatures as given by ship companies than on their evidence of the way they appoint and treat their medical officers.

I am, Sirs, yours truly,

Northumberland-avenue, Oct. 28th, 1893. THOMAS DUTTON.

STRICTURE OF THE ŒSOPHAGUS AND CANCER OF THE LIVER.

To the Editors of THE LANCET.

SIRS,—A patient was recently sent to me with a request that I would perform gastrotomy. The man, about fifty years of age, was in a state bordering on starvation due to a complete inability to swallow. He said that he had already been the inmate of two London hospitals, and in each his disease was diagnosed as cancer of the œsophagus, and gastrotomy advised. I found that his inability to swallow was absolute, and that not a particle of liquid or solid entered the œsophagus. A feeding-tube, however, was passed at the first examination without much difficulty and the patient fed. On examining the abdomen a very large liver was discovered, and its nature was considered to be cancerous. No operation was undertaken and the man died. I was present at the necropsy, and, with the exception of some contraction and a thickened appearance of the muscular coat of the œsophagus, all was apparently healthy. The liver was cancerous. I am informed by Mr. F. Treves that he has had at the London Hospital three such cases, and that the association of reflex stricture of the œsophagus and primary cancer of the liver is known at least to one of his colleagues. In giving publicity to these statements you will make known a fact that is in the possession of a few only, and give those members of the profession who have come across similar cases an opportunity of recording the same.

I am, Sirs, yours faithfully,

Weymouth-street, W., Oct. 30th, 1893. MAYO COLLIER.

THE AFTER-TREATMENT OF VACCINATION.

To the Editors of THE LANCET.

SIRS,—I hope that the Royal Commission on Vaccination will make some suggestion as to what should be done for the after-treatment of vaccination cases. I do not think that it would be too much to expect boards of guardians to provide medicine, ointments, &c., if (as no doubt would be the case) the public vaccinator was willing to prescribe for the many cases requiring such treatment. I suppose that no one doubts that the late spread of small-pox has been simultaneous with the sitting of the Royal Commission and has been caused by the members of it. As they have inflicted the most calamitous evil of modern times upon us, they should do what they can, slight though it may be, to compensate for it.

I am, Sirs, yours truly,

WM. WOODWARD, M.D. St. And.,

Worcester, Oct. 28th, 1893. Late Public Vaccinator, Worcester Dist.

"MATERIALISM AND LIFE."

To the Editors of THE LANCET.

SIRS,—Now that Dr. MacLennan has written a second letter I do not see why he made his onslaught on the so-called materialists. Physiologists are endeavouring to discover the functions and properties of the living organism, as Dr. Burdon Sanderson told us in his address at the meeting of the British Association at Nottingham, by methods drawn on strictly scientific lines. Dr. MacLennan certainly spoke in his first letter of mind and life as if they were two entities, self-existent, and operating to keep together the whole organisation of the human being. He now explains that they are not independent of the bodily organism. He means, I suppose, that if you boil a seed you deprive it of life, and if you strike a man on the head his mind is gone. He infers that neither life nor mind can be known or studied except in connexion with the organisation. His methods, therefore, are the same as those of the materialists whom he denounces. What he has really been discussing is one outside the domain of ordinary scientific inquiry—a question of religious belief. He asks, also, how personal identity can be consistent with the molecular change ever going on in the brain. I deny this change in the sense of continual renewal of healthy structure. I have just seen a friend who has a scar on his hand resulting from a cut received fifty years ago; it is in no way altered. I believe most of us have scars in our brains made in infancy.

I am, Sirs, your obedient servant,

Oct. 31st, 1893. X.

COCAINE POISONING DUE TO CATHETERISATION.

To the Editors of THE LANCET.

SIRS,—The following case, which occurred a week or two ago, is interesting. A man, aged thirty-four, who had suffered from a stricture for many years, sent for me on Aug. 17th, suffering from complete retention of urine. After some trouble a No. 1 gum elastic catheter was passed, the urethra being narrowly constricted in at least three places. On Aug. 20th a No. 2 was passed; but as the patient complained of a good deal of pain during the passage, the following oil was ordered—viz., cocaine, two grains; oil of almonds and olive oil (equal parts) to one ounce—for lubricating the catheter. On Aug. 24th No. 2 and No. 3 catheters were passed, the above oil being used as a lubricant. Immediately after I had left the patient he began to complain of a coldness of his feet, which gradually spread up the legs to the body, when a violent rigor set in, lasting for two hours. On arrival I found the patient lying on his side, unconscious, with his face distinctly cyanosed; there was rapid shallow breathing, the pulse being 130; the body was covered with a red rash closely resembling that of scarlet fever; the penis was œdematous and covered with the rash; the extremities exhibited no rash; the temperature was 104° F. The patient had vomited once before my arrival. As he had not voided any urine since the catheter was passed in the morning, and as the bladder was full, the instrument was again employed to empty the bladder. A mixture of salicylate of soda and liquor ammoniæ acetatis was ordered. On visiting the patient six hours later the temperature had fallen to 102°, the pulse being 120. The rash, although still present, was not so marked; there was no injection of the throat; the penis was still œdematous. The patient complained of a severe headache and was excited. The urine was again drawn off and phenacetin ordered for the headache. On Aug. 25th the temperature was 100·4°, the pulse 100, and the rash disappearing—in fact, it had nearly disappeared; the penis was no longer œdematous; the headache was no better, but the patient was quieter and quite conscious. The urine was again drawn off and a mixture of nitrite of soda and bromide of potassium was ordered, in addition to an ice-bag for the head. On Aug. 26th the pulse and temperature were normal, the headache was gone, and the patient was practically in his usual state of health. The cocaine oil was not used after the rigor, vaseline being substituted. The above, I think, is an interesting and a rather unusual case.

I am, Sirs, yours truly,

Oct. 16th, 1893. C. F. W.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Hospital Sunday and Saturday Funds.

ON Sunday last the usual collection for our medical charities was made in Newcastle and district. The day was very fine, and it is hoped that the result will be satisfactory. The sum of £81,000 has been collected and distributed by means of this fund since 1870. Nearly one-half of this amount has been awarded as a free gift to the various medical charities, and the remainder has been devoted to the purchase of letters of admission and distributed amongst the sick poor. The workmen of Messrs. Allhusen's chemical works, Gateshead (United Alkali Company), have contributed the sum of £150 to the Hospital Saturday Fund.

Alnwick Infirmary.

The annual meeting of the governors of the Alnwick Infirmary has been held, and the report showed that there had been good and much-needed work accomplished. The infirmary had received a gift of a piece of ground adjoining it from Mr. William Turnbull, an old subscriber. The financial state of the institution was satisfactory. The

honorary medical officers were thanked for their valuable services.

The Outbreak of Diphtheria at Gateshead.

At the last meeting of the Gateshead Town Council the sanitary committee submitted a report on the outbreak of diphtheria in the borough. The outbreak appears to have been connected with defective drainage at the Higher Grade School. Sixteen cases in all had occurred, and there had been six deaths, but no fresh cases had been reported since Oct. 5th. The council decided to adopt the Infectious Diseases Act, including the Notification Clause, the same to come into operation on Dec. 1st.

Diphtheria at Annan.

The serious epidemic at Annan still prevails. Twenty cases have been reported, some being very severe and some having a fatal termination. The Annan Academy and all the burgh schools have been closed by the School Board.

Microscopy.

The Carlisle Microscopical Society has given its first demonstration of the season, when Mr. C. S. Hall, M.R.C.S. Eng., &c., addressed the guests and a number of interesting objects were exhibited.

Serious Accident to a Durham Surgeon.

I regret to hear that Mr. Gardner of Washington, a well-known surgeon in the county of Durham, has met with a serious accident. He was driving home from Newcastle on Saturday evening last when the coachman lost control of the horse, with the result that both Mr. Gardner and his man were thrown out of the vehicle. The latter was much shaken, but was able to make his way for help, his master meanwhile lying on the road insensible. After some delay Mr. Gardner was removed in an ambulance to his home at Washington, where he was seen by medical friends from Newcastle and Sunderland. He is in a very precarious state.

Medical Mayors in the North.

I hear that Mr. Alderman Boyd, M.R.C.S., has been nominated as mayor of the city of Durham for the fifth time. Dr. Armstrong also has been nominated for a similar office at Appleby.

Newcastle-on-Tyne, Nov. 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh University General Council.

THE statutory half-yearly meeting of the General Council of the University of Edinburgh was held on Friday of last week, the Vice-Chancellor, Principal Sir William Muir, presiding. The first business was the election of two assessors to the University Court, in room of the Right Hon. J. H. A. Macdonald, Lord Justice Clerk, and Mr. Thomas KcKie, Advocate. Mr. J. Hope Finlay, W.S., and Mr. A. Taylor Innes, Advocate, were nominated and agreed to. The question before the council which proved to be of most interest was that of tests in the theological faculty. The majority of the sub-committee appointed to consider and report on this advocated the entire abolition of tests in the universities, and also the abolition of the Faculty of Theology altogether, some of the chairs to be retained and placed under the Faculty of Arts. This was met by an amendment expressing "disapproval of any proposal to abolish the Faculty of Theology in the Scottish universities; and in regard to proposed changes in the constitution of these Faculties the council meanwhile deems it inexpedient to pronounce any conclusive finding in the absence of any immediate prospect of legislation in the matter." This amendment was carried by a large majority. The reports of the Committee on Ordinances were submitted and after discussion agreed to. The most important of these, medically considered, was the draft ordinance dealing with the institution of Boards of Studies in the Faculties of Medicine and Science, which is of sufficient importance to be given in detail.

"DRAFT ORDINANCE [*General No. 14.—Institution of Boards of Studies in the Faculties of Medicine and Science*].

"By the ordinances setting forth the regulations for degrees in Medicine and in Science it has been provided that (1) it shall be the duty of the Senatus to determine, from time to time, the number of meetings of which a full course in any subject shall consist, and to report its determination to the University Court for its approval; (2) the Senatus, with the approval of the University Court, may sanction half-courses of not less than half the number of meetings which constitute a full course in the subject, but two half-courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose; (3) it shall be the duty of the professors and lecturers annually, at the end of each winter session, to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively; the Senatus to transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval; and, lastly, that it shall, in the Faculty of Science, be the duty of the professors and lecturers annually at the end of each winter session to submit to their Faculty for its consideration a syllabus of the subjects and books proposed for the work of their classes during the next academical year; the Faculty to transmit such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval. Under these ordinances the University Court would thus have a controlling voice in regard to the following matters: the number of meetings in each full course, the sanctioning of half-courses, the approval of two half-courses as equivalent to a full course, the approval of schemes of distribution of the respective proportions of the courses applicable to lectures, demonstrations &c. On the other hand, the University Court has been excluded from control over the actual educational syllabuses. These are left as a matter within the control of the Senatus itself and, therefore, practically controlled by the members of each Faculty. But this control would again be merely nominal, for it can hardly be expected that any professors would interfere with their colleagues' discretion, except in cases where there happened to be some ill-feeling within the Faculty, or some dispute as to overstepping the bounds of any professor's commission, to the annoyance of one or other of his colleagues. But precisely in such cases there ought to be some independent authority, such as the University Court, to settle the matter; and, further, the Senatus, after consultation with the Board of Studies, has had jurisdiction given it over the teaching arrangements of the lecturers appointed by the University Court to lecture on particular subjects not already taught within the University, and any questions between them and the professors were to be determined by the Senatus, with appeal to the University Court. But, on the other hand, it is well known that there are hardly any branches which are not claimed by one professor or another; and the whole arrangement presents a degree of complication which seems very liable to lead to disputes or disagreement. Beyond that, the professorial control over the syllabuses of study would seem to have a more far-reaching effect than could have been intended. The University Court has been enjoined not to grant or continue recognition to any institution or teachers unless they are satisfied that their courses of instruction are equivalent to the courses sanctioned in the universities of Scotland. This is a prohibition subject only to the satisfaction of a condition; and the University Court might, in course of time, find its discretion hampered by the actings of the professorial staff. Some such considerations as these may have pressed upon the minds of the Commissioners, for they have now issued the draft ordinance under notice. They proceed on the preamble that it is desirable that a certain number of lecturers and examiners who may not be members of the Senatus Academicus should be associated with the professors in the Faculties of Medicine and Science in regulating the course of study qualifying for graduation in these Faculties. They then purport to give effect to the principle set forth in their preamble. It may be observed that the Commissioners have thus departed from the principle of allowing each professor an uncontrolled discretion with respect to all subjects of study within the terms of his commission; that they have departed from their previous proposal to give the Senatus control over the teaching arrangements of the lecturers appointed by the University Court; that they have admitted that the independent examiners ought to have a say in the regulation of the course of study qualifying for graduation within the University; and that they have given their approval to

the principle that a board ought to be instituted for the regulation of the course of study within each Faculty, such board to be professorial only in part. Their mode of solving the problem is the following: A Board of Studies is to be instituted in the Faculty of Medicine, and one in the Faculty of Science. This board, in each of these Faculties, is to consist of the professors of that Faculty (along with such professors in other Faculties whose subjects qualify for graduation in that Faculty, as the Senatus may from time to time appoint), together with such lecturers and additional examiners as the Senatus may from time to time select; and the duties of the board are to consider the matters referred to above—the number of meetings &c.—and report their opinion to the Senatus; and also to receive from the professors and lecturers the schemes of study proposed by them, and to transmit the same to the Senatus Academicus, with such observations as they make think fit to make thereon. Neither in its constitution nor in the powers which it is proposed that it is to possess does your committee see the promise of a useful working board. Your committee adhere to the opinion, repeatedly affirmed by the council, that the whole ultimate responsibility for the conduct of the university as an educational institution should rest with the University Court; but, failing this, they give their general assent to the principle laid down by the Commissioners in the preamble to this draft ordinance. They are of opinion that, while the professors ought to be amply represented on the Board of Studies, the Board of Studies itself, if it is to be of any real utility, and not merely a fifth wheel in the coach, should be an independent body vested with sufficient power to give effect to its opinion in the particular matters in respect to which it has been called into existence; and that all the lecturers appointed by the University Court, and all the examiners, should be members of the board *ex officio*, or, if a selection from among their number is considered desirable, that such selection should be made by the University Court and that none of the non-professorial members of the proposed Board of Studies should in any case owe their seats on that board to the favour of the Senatus. They are of opinion that such a board should, in the words of the ordinance, 'regulate the course of studies,' with or without consultation with the Senatus, and that the board should transmit its proposals to the University Court for its approval or otherwise."

Another important draft ordinance dealing with supplementary powers of the University Court was favourably reported on. This ordinance proposes: 1. That when a professorship becomes vacant the University Court may revise and adjust the terms of the next commission, and that they may exercise this power, whoever may be the patrons of the chair, provided they give notice within four weeks after the vacancy has occurred that they intend to do so. 2. That when the Court founds a new chair it may appoint the professor for a limited term, renewable at the pleasure of the Court. In such a case the Court may make any arrangements about the professor's right to a pension, and may appoint him on the terms that he is to have no such right.

Dinner to Professor Symington.

Last Saturday Professor Symington was entertained to dinner by past and present pupils. The dinner was hurriedly arranged for; but, notwithstanding this, there were about one hundred present, including some of Professor Symington's colleagues in the school. The chair was occupied by Lord Provost Russell, M.B., and among those present were Sir W. Turner, Professor Chiene, Dr. W. Russell, Dr. G. Mackay, Mr. Caird, and Professor Geddes. The chairman proposed the toast of the evening in very suitable terms, and it was received with great enthusiasm. Professor Symington in an excellently conceived speech traced his connexion with the Edinburgh school and acknowledged the encouragement he had received during the whole period of his connexion with it. The evening was a memorable one, full of song and humour.

The Edinburgh Health Society.

This Society, after a year or two of dormant existence, which was probably regarded by many as final extinction, has again sprung into life and has issued quite a novel syllabus of lectures, the first three being by Professor McFadyen of the Royal Veterinary College of London, who will deal with subjects he is so well fitted to handle. He will be followed by Dr. Noel Paton with two lectures on Work.

Oct. 31st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal University of Ireland.

A PUBLIC MEETING for the conferring of the degrees of the Royal University of Ireland was held in the University buildings last week, and presided over by Lord Morris, in place of the Vice-Chancellor. The chairman, in his address, stated that the total number of candidates who were examined last year was 2857, while this year they numbered 2879; that the number of graduates who were admitted to degrees last year was 201; and that this year there were now attending for the purpose of having degrees conferred on them 211, of whom 36 were ladies. By the Charter of the University its degrees were left open to women, and even at that time many persons entertained doubts as to whether it was advisable that females should engage in academic struggles. The question was no longer one of argument. It had become an accomplished fact, and the Royal University of Ireland had done its part in that achievement, because from the list which he would read to them it would appear that the ladies were able to hold their own with the other sex, for which it was previously supposed academic degrees were reserved. Of the 36 females upon whom degrees were to be conferred no less than 14 had achieved remarkable and striking successes. That university was not founded as a teaching university, which was the primary definition, he believed, of a university—namely, a school for universal learning; but it had been most successful in the department for which it was founded—namely, as an examining university.

The Dublin Water-supply.

Both north and south sides of the city are supplied from the Grand and Royal Canals respectively, and chemical and microscopical analyses have shown that both these supplies are extremely pure and waters of a very high class. So far the city is safe, but the townships which depend on the Vartry—e.g., Pembroke, Blackrock, Kingstown &c.—are suffering a good deal; only four hours' water in the twenty-four hours is allowed, and the Vartry reservoir, should no rain fall in the interval, will be unable to supply any water after sixteen or twenty days. There is practically no other supply available at the present time.

Death of Mr. Samuel Henry Webb, A.B. T.C.D., F.R.C.S.I.

I record with deep regret the death of Mr. Webb, which sad event took place on Saturday last at his residence, 27, Harcourt-street, Dublin. He possessed a strong and vigorous constitution, and enjoyed remarkably good health. For some time he acted as a Demonstrator of Anatomy in the Ledwich School of Medicine, and lately he was an Examiner in Physics and Chemistry at the Royal College of Surgeons in Ireland. He leaves a wife and one child to deplore his untimely decease.

The Water-supply of Belfast.

At a meeting of the Water Commissioners held on Oct. 30th it was decided that it was absolutely necessary to push on the execution of the Mourne works at a greater rate than hitherto. This had been decided on, owing to the fear that if the city suffered, as other places had, from scarcity of water, business would be paralysed. Originally the idea was to bring the Mourne water to Belfast in seven or eight years, but it had now been arranged that this new supply must be in the city much sooner. In order to do this capital would be raised by an addition of twopence in the pound to the rates of the city. With reference to the present supply, it was stated that they had received no additional store in their reservoirs during the past six weeks; the fall of rain had scarcely been sufficient to supply the immediate wants of the city. They were not, however, so badly off as some of their neighbours. They had out of their reservoirs been able to meet the demands of the city for eight months; but for a long time yet the city would have to subsist on a diminished supply.

Opening of the Medical Session.

The medical session opened on Tuesday, Oct. 31st, when Dr. Sinclair, Professor of Surgery, delivered an introductory address in the theatre of the Royal Hospital, which was crowded with students. Nearly all the members of the medical staff were present. After welcoming the students to work again, Professor Sinclair addressed himself specially to the junior men, to whom he gave some admirable advice as

to the best way of utilising their time so as to reap most advantage to themselves. He impressed upon them the importance of case-taking, of attendance in the out-patients' room, and of endeavouring to train thoroughly their five senses. Professor Sinclair's address, which was full of wisdom, humour, and sound common sense, was listened to by the students with the closest attention.

Queen's College, Belfast.

On Tuesday, before a very large audience of students, medical practitioners, and colleagues, Dr. Symington, the new Professor of Anatomy, was introduced by the President of Queen's College, Belfast, and gave his inaugural lecture [the lecture is published in our present issue, p. 1107.—ED. L.]; and on Wednesday Dr. Thompson, who has been appointed Dunville Professor of Physiology, delivered his introductory address. Both professors, who come from other schools, received a very cordial welcome from their audience.

Oct. 31st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Franco-Russian Amenities.

THE medical profession was not behindhand in welcoming the Russian delegation in whose honour the Parisian population may be said to have gone mad. The French medical press took the initiative and arranged a banquet on Friday, Oct. 23rd, at the Grand Hôtel, in honour of the medical officers of the Russian Squadron—viz., Drs. Brandt, Medvedef, Ochotive, Aristof, and Botkine. The chair was occupied by Professor Cornil, Senator, and the numerous company included such representative men as Drs. Lucas, Directeur du Service de Santé de la Marine, Dujardin-Beaumetz, Directeur du Service de Santé au Ministère de la Guerre, Brouardel, Dean of the Paris Faculty, Sappey, Verneuil, Bouchard, Joffroy, and Roux (representing M. Pasteur). Numerous toasts were proposed, the most notable being the health of two young members of the profession present on the occasion whose respective fathers achieved so much for the advancement of medicine—I refer to MM. Charcot and Botkine. The young Russian naval surgeon's reply evoked the utmost enthusiasm, and the matter-of-fact Briton would indeed have stared had he witnessed the kissing and hand-shaking that followed. Still, putting political feeling apart, it is pleasant to see votaries of the same profession, although hailing from different countries, fraternising and exchanging ideas.

Tetanus in the Human Being from Accidental Inoculation.

The incident related below being, I believe, unique, I transcribe it and its details for the benefit of the readers of THE LANCET. Its interest lies in the fact that it is the only known instance of tetanus in man produced by inoculation of the specific bacillus of the disease. The investigator who narrowly escaped falling a victim to this involuntary experiment is M. Nicolas of Lyons. The liquid injected was the *filtered* "culture" of Nicolaïer's bacillus, the activity of which was such that one cubic centimetre of it introduced into the areolar tissue of a rabbit killed that animal in thirty-six hours, after an incubatory period of less than twenty-four hours. Moreover, eight cubic centimetres of this same liquid killed, in three instances, a fowl—an animal hitherto regarded as proof against tetanus. The events are thus chronicled:—July 26th: Accidental puncture with the needle of a Pravaz syringe (containing an inappreciable quantity of culture) in the left thenar eminence; no phenomena until July 30th, when contact with cold water produced sudden adduction of the left thumb, which contraction persisted. No fever.—July 31st: The contraction extends on the occasion of renewed contact with cold water to the whole of the left hand and forearm; forcible flexion of the fingers and hand, which is inclined towards the ulnar side. No pain or fever.—Aug. 2nd: The spasm of the left hand and arm increases without spreading; in the evening slight trismus. No change until Aug. 8th, when the trismus became greatly aggravated, mastication being impossible.—Aug. 9th: Some difficulty in moving the tongue. At 9 P.M. sudden attack of episthotonos. The patient now remains in bed and takes large doses of chloral.—Aug. 10th: On waking, after having slept uninterruptedly (he had absorbed fourteen grammes of chloral), agitation and spasms of the whole body on the slightest provocation. The condition remained stationary (twelve grammes of chloral *per diem*) up to Aug. 13th, when neuralgia of the buttocks appeared. No albumen in the urine; a few rigors; pulse 80.—Aug. 14th: Pains in the spine, especially in the loins (spinal epilepsy); otherwise *in statu quo*. Ordered seven grammes of chloral and three grammes of sodium bromide per diem. On the 15th and 16th there was some diminution of the contractions, but an attempt to leave the bed excited an attack of episthotonos lasting several minutes.—Aug. 18: Signs of medullary congestion, exaggeration of patellar reflexes, epileptiform tremblings of legs, and agitation. A further improvement in the contractions.—On the 20th the improvement was more marked, but trismus, although diminished, persisted, as did also the contractions of the neck and the left hand and forearm. Four grammes of chloral were ordered daily. The improvement continued slowly up to Sept. 1st, when an absence from bed for fifteen minutes recalled generalised spasms, which ceased in a few hours. The chloral medication was discontinued on Sept. 3rd.—Sept. 13th: Nothing remains but a slight contraction of the left hand and slight trismus, aggravated by any stimulus. Spinal excitability is still considerable.—Sept. 19th: The last vestige of the disease is some difficulty in the movements of the left hand.—Oct. 15th: Disappearance of all symptoms excepting some degree of spinal excitability. The duration of the disease was forty-one days. The site of the inoculation was the first to respond to the action of the poison and the last to recover from it. Incubation lasted four days, despite the fact that the liquid inoculation consisted of soluble toxines. This supports the view of MM. Coarmant and Doyon according to which the soluble substances manufactured by Nicolaïer's bacillus are not in themselves toxic, but manufacture the true poison at the expense of the host into whose body they gain an entrance.

Professor Potain.

As I predicted last week, Dr. Potain has been elected to replace the late Professor Charcot at the Académie des Sciences. The voting was as follows: Professor Potain, 43 votes; Professor Germain Sée, 4 votes; and Dr. Lanceraux, 3 votes.

Graduation Statistics.

During the year 1891–92 the seven French Faculties of Medicine granted the degree of Doctor in Medicine to 635 persons, being an increase of 41 on the figures of the preceding academical year. The details are as follows:—

	1891-92.	1890-91.
Bordeaux	74	55
Lille	14	14
Lyon	108	71
Montpellier	53	60
Nancy	10	11
Paris ... ... —	371	374
Toulouse	5	9
	635	594

In the year 1889–90 the graduations were 507 and in the last decennial period 6090, or an average of 609 per annum.

Professor Charcot's Successor at the Salpêtrière.

Insurmountable difficulties appear to have arisen in the choice of a physician deemed worthy to take the late Dr. Charcot's place at the famous institution which his neurological researches have made famous all over the world; a compromise has accordingly been arrived at in the nomination of Dr. Brissaud for the period of one year, at the end of which term it will be decided whether he is to continue to hold the office.

Oct. 31st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Presentation of an Address to Professor Virchow.

AT the meeting of the Berliner Medicinische Gesellschaft on Oct. 25th Professor Virchow was elected honorary president of the Society and was presented with an address before a crowded assembly. Professor von Bergmann, in presenting the address, referred to Professor Virchow's great services to the Society and the honour which his fifty years of hard scientific work had brought to the medical profession, and he concluded by saying: "All your pupils and colleagues, all friends of science, unite in wishing that the great powers and the love

of work which have been yours since the day of your doctorate half a century ago may continue at your disposal to the very end of your life." Professor Rindfleisch (Würzburg) and Professor Ponfick (Breslau) were specially at the meeting in order to present Professor Virchow with the congratulations of their respective universities.

Club Practice.

The managers of the sick club of the district of Prenzlau have introduced into their rules certain paragraphs dealing with the remuneration and position of their medical officers which the local medical society consider to be incompatible with the dignity of the profession. The medical society has therefore decided that no medical man who accepts the proposed regulations shall be treated as a colleague.

Hernia of the Liver.

Professor Kusmin[1] records a curious case of hernia of a part of the left lobe of the liver. The patient, a woman aged twenty-eight, by occupation a cook, had suffered for a year from a painful swelling between the umbilicus and the xyphoid cartilage. On account of her stoutness, the patient, though she wore no corset, had been in the habit of tying her clothes very tightly at the waist. The sac was opened, and the ensnared portion of liver was freed from constriction and returned into the abdomen. The patient made a rapid recovery and seven months later had had no return of her complaint.

Professor Henoch has taken leave of absence and will winter in Meran in order to avoid the severe winter climate of Berlin.

Professor Hans Virchow has been appointed Senior Prosector in the Anatomical Institute in place of Professor Hartmann, deceased.

Oct. 31st.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Cholera in Austria-Hungary.

ACCORDING to the recent official reports the epidemic is decreasing in Galicia, where the district of Stanislau had to be declared as a cholera *foyer* as agreed at the last International Cholera Convention. The official returns from Hungary seem also to mark a sight decrease of the disease. The epidemic, moreover, did not show any increase in Slavonia, which had become infected by cases imported from Bosnia. A case of cholera occurred at Vienna last week. It was that of a Hungarian boatman who arrived with the symptoms on a Danube river-boat on Oct. 27th. He was immediately taken to the cholera hospital, where he died on the following day. He was treated by transfusion of saline solutions, which proved to some extent beneficial, as the anuria disappeared for a time after the transfusions. The bacteriological examination made at the necropsy proved the case to be one of *cholera asiatica*. It is interesting that during the last three epidemics—i.e., in the years 1886, 1892, and 1893—isolated cholera cases were imported from Hungary at the same time of the year (end of October) to Vienna.

Society of Physicians in Vienna.

The new building of this Society was opened on Friday last, and the opening address was delivered by the President, Professor Billroth. The lecture of Professor Puschmann on Medical Societies of the Past and the Present gave an interesting sketch of the development of medical associations from the times of ancient Greece up to the present date.

Introductory Lectures.

The recently appointed new professors of the Vienna Medical Faculty delivered their introductory lectures last week. Professors Neusser and Weichselbaum dealt respectively with the merits of their respective predecessors, Professors Kahler and Kundrat.

New Entries at the Medical School.

I am informed that there is a marked decrease in the number of medical students entering the profession this year. According to the statistics submitted at the meeting of the Anglo-American Medical Society held a week ago, there are also fewer American and English post-graduates in Vienna now than in previous years.

Oct. 30th.

[1] Berliner Klinische Wochenschrift, No. 44.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Raising Funds for the Hospitals.

ALL the Australian hospitals are in debt, and in many instances sorely pressed for money for immediate requirements. Some months ago the managers of the Women's Hospital, Melbourne, instituted what was called a "self-denial week." Everyone in the community was asked to deny himself or herself some luxury for one week and give the money so saved to the hospital. The result was exceedingly satisfactory, several thousand pounds being raised—more than enough, in fact, to free the hospital from immediate want. The example has been followed in Sydney for the benefit of the Prince Alfred Hospital, and £3837 has been obtained by this means. The various Friendly Societies have also been holding processions and demonstrations, and have had "self-denial weeks" for the benefit of various local charities, such as the Balmain Cottage Hospital and the Sanatorium at Auburn, with very successful results.

A New Hospital in Melbourne.

The Sisters of Charity, who have most successfully carried on the St. Vincent's Hospital in Sydney, have commenced a hospital of the same kind in Melbourne. Some private houses belonging to the order have been so altered and added to as to provide suitable accommodation, and the new institution will be formally opened by his Excellency the Governor early in November. The out-patient department is already complete, and work has begun there. The out-patient staff consists of Dr. Nelly, Dr. A. L. Kenny (in charge of diseases of the eye, ear, and throat), and Dr. Herman Lawrence (in charge of diseases of the skin). Much curiosity is felt as to the selection of the in-patient staff, which is not yet announced. It is understood that it will not be entirely composed of Roman Catholics. Of those already appointed, two, Drs. Nelly and Kenny, belong to the Romish Church. Two prominent Catholic members of the profession in Melbourne are said to be certain to be on the staff—viz., Dr. MacInerney, who is one of the physicians to the Melbourne Hospital, and Dr. O'Sullivan, one of the medical officers to the Women's Hospital, Melbourne.

Administering Chloroform: an Assault.

A case has been tried in the police-court at Castlemaine, Victoria, which is of some interest to medical men. A woman who had lately been a patient at the Castlemaine Hospital brought an action against the late resident surgeon, Dr. Hutton, for alleged assault, which consisted in his having administered chloroform to her without her consent. Dr. Hutton showed that the administration occurred in the ordinary routine of practice, and that the patient had not objected at the time. The case was decided in favour of Dr. Hutton.

Concealment of Sex.

A case having some scientific interest in its bearing on the question as to whether secondary sexual characters are inherent or acquired has recently been investigated. An individual known as "Jack Jorgensen," and employed for many years as a farm labourer at Elmore, in Victoria, died suddenly, and the body was found to be that of a woman. Jorgensen's real sex had never been suspected. She had been in the Mounted Rifles, and was noted for her capacity for hard work. She was very unprepossessing in features and rough in manners, so that she was unpopular in the district and had no intimates.

An Alleged Surgical Blunder.

At a recent meeting of the committee of the Women's Hospital, Melbourne, the chairman of the staff asked that inquiry might be made into the case of a woman who had been a patient at that institution but had been subsequently admitted into the Alfred Hospital. It was alleged that laparotomy had been performed there for a supposed ovarian cyst, but simple pregnancy being the only condition found Porro's operation was performed. The committee deferred the matter, and meantime the operator made a statement to the staff at the Alfred Hospital to the effect that his own diagnosis was a fibro-myoma of a pregnant uterus associated with enlarged ovary, and that the operation was performed to relieve urgent symptoms. The staff accepted this statement, and decided that in their opinion the treatment adopted was correct. It is unfortunate that the specimen cannot be produced.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual meeting of the Fellows and Members of the Royal College of Surgeons of England was held on Thursday afternoon at the College, Lincoln's-inn-fields, Mr. J. W. Hulke, F.R.S., President of the College, in the chair. There was a large attendance of the members of the Council, but the Fellows and Members were by no means well represented in point of numbers.

The President in opening the proceedings, gave a *résumé* of the annual report from the Council, which recorded in considerable detail the work done by the College in its various departments during the past collegiate year, from July 14th, 1892, to July 7th, 1893. He pointed out with regard to matters relating to the management of the Examination Hall that the committee had brought forward two subjects of interest during the year—the establishment of a sinking fund to cover any liabilities which might arise on the termination of the lease of the site of the Examination Hall and laboratories, and the extension of the conditions of letting the examination rooms and theatre. The committee suggested that it would be wise to make some provision against the termination in 1984 of the lease by a small annual investment, and in pursuance of this suggestion the two Colleges had now provided for the establishment of a sinking fund by agreeing to invest £150 per annum for this purpose. A deed had been drawn out by the solicitors providing for the necessary arrangements, and Sir Dyce Duckworth and Dr. Hale White, on behalf of the Royal College of Physicians, and Mr. T. B. Jessop and Mr. Howard Marsh, on behalf of their College, had been appointed to act as trustees of the fund. As regards the second subject the committee had hitherto only been authorised to let the rooms at the Examination Hall to other institutions for examination purposes. A considerable sum had been derived by this means, but the committee suggested that the income of the Colleges might be still further augmented if the limitation that the rooms might only be let for examination purposes were removed. The Council of their College had accordingly adopted a resolution authorising the committee to let the rooms and theatre for such purposes as they might think fit, and a similar course would doubtless be pursued by the Royal College of Physicians when the matter was brought before them. As usual, however, the chief business of the committee had reference to the curriculum of study and the management of the several examinations, and in this connexion synopses in pharmacology and practical chemistry had been issued by them, the former having been drawn up after conference with the examiners in materia medica and pharmacy, and the latter being an alteration of the old synopsis, unanimously recommended by the examiners in chemistry. With regard to the question of a new university in London, no further steps had been taken during the past year, but the following resolution was adopted by the Council on Jan. 12th last—viz: "That, in order to ascertain the views of the Fellows and Members of the College on the position which, in their opinion, this College should hold in the proposed Teaching University for London, separate meetings of Fellows and Members be convened at an early date after the report of the Gresham Royal Commission has been made public." Having described the steps taken by the Nomination Committee with regard to the proposal of alterations in lecture arrangements, the President alluded to other features of the report, remarking upon the value of the additions made to the museum during the year. He could wish that the courses of lectures were better attended. An important event in the year was the celebration of the jubilee of the institution of the Fellowship, which was celebrated on July 5th and 6th. The Council had decided to provide a bust of Sir Richard Owen, K.C.B., for the College, and had entrusted the execution of the work to Mr. Alfred Gilbert, R.A. He submitted that the report justified the Council in claiming that the past College year had been satisfactory.

Surgeon-Major Ince moved the following resolution: "That this meeting of the Fellows and Members desires to thank the Council for the full and interesting report now presented, also for the important concessions already granted to them, and relies upon the Council's continued favourable consideration of such further suggestions as may, in the judgment of the Council, tend to the harmony, stability, and dignity of this great corporation." He believed that the resolution would commend itself to the hearty support and coöperation of every gentleman sitting in that theatre and of every thoughtful gentleman present. He thought that the members of the corporation should have some direct as well as indirect voice in the election of members of the Council. They must trust the Council to carry out alone the financial arrangements of the College. He did not know that they had a complaint to make against the members of the Council. They knew almost everything that took place. The Council had now decided to consult the Fellows and members before they carried out any important change with regard to the relations of the College. One of the most important was that which bore on the University of London. He hoped and trusted that the Council would never listen to the suggestion of aiding and assisting a second university in London. He thought the Council should endeavour to tighten the bonds of union between the Royal College of Physicians and themselves. He decidedly approved of the action of the Council in providing a bust of Sir R. Owen, but would respectfully suggest that a similar memorial should be provided of Mr. John Hilton of Guy's Hospital.

Mr. R. M. Craven, supporting the resolution, adverted to the fact that the teaching of surgery was not of such a practical character now as it formerly was, and he would like to see the teaching advocated by Mr. Thomas Cooke more generally adopted.

Mr. Nelson Hardy thought that eventually they would turn into a mutual admiration society. The empty benches showed the effect of the admirable policy which the Council had pursued. A very prominent Fellow, who ought to have been President long ago, nearly twelve years since in a medical magazine stated the case of the Members. There was not a word in that article which might not be pondered with profit by every member of the Council if they desired to know what the wishes of the Members of the College were.

Mr. George Brown declared that the London medical schools were ceasing to attract students. This year showed a greater falling-off than the year before. The facilities and opportunities for instruction in London were at any rate equal to what they were in the provincial schools, but yet the students did not come forward, while their number increased in the provincial centres. That showed that the Council was not doing all that might be expected to make their medical training popular. He hoped that the Council would call the Members together in order to arrive at their opinion with regard to any scheme that might be in contemplation. The Council was largely responsible for the state of things which obtained in some institutions.

Mr. Joseph Smith said that he had a feeling of humiliation at seeing the attenuated attendance at this annual meeting.

The resolution was carried by 15 votes to 7.

Mr. Keetley proposed a resolution to the effect that, if separate meetings of Fellows were summoned regularly by the Council for consultative purposes, it was desirable that they should not supersede or interfere with the annual meeting of Fellows and Members, at which the annual report of the Council was presented and discussed. It was not his intention to turn his back upon the Members, who, after all, formed the backbone of the College.

Mr. Morton, who seconded the resolution, thought it very essential that there should be a meeting of the whole body corporate to consider the report.

Mr. Walter Rivington said there had been a discussion in the Council as to whether this meeting should be done away with, but that was entirely due to the mistaken policy pursued by some of the gentlemen on the benches. He would be very glad to see the Members of the College represented on the Council.

The resolution was carried, and a vote of thanks to the President brought the proceedings to a close.

Obituary.

J. G. D. DOUGLAS, M.D. EDIN.

WE regret to announce the death of Dr. Douglas of Bournemouth, which took place on Wednesday, Oct. 26th, at the early age of forty-four. Dr. Douglas, after graduating in Edinburgh in 1871, went to Bournemouth as house surgeon to the Cottage Hospital and Dispensary. When he had occupied this post for a couple of years he started work in the town, and rapidly gained an extensive practice. He was very much esteemed by a large circle of patients and friends. For some years he had been in failing health owing to tuberculous disease of the lungs, to which he ultimately succumbed; but though suffering from this malady he bravely remained at his post, and with indomitable courage carried on the work both of his private practice and of his hospital appointments. The large concourse of people who assembled at his funeral bore striking testimony to the regard in which he was held. He will be much missed by many to whom his kindly manner and great powers of sympathy had much endeared him, as well as by those who valued his high professional attainments. He has been cut off when but in his prime. Devoting himself to the engrossing duties of a large practice, he left himself no time to enrich the literature of the profession. He was a man of deep religious conviction, and was always ready to help forward any good work. He was firm and loyal in his friendships, and those who knew him best valued most his personal worth. He was at the time of his death consulting surgeon to the Royal Victoria Hospital, and to the Firs Home for Advanced Cases of Consumption.

WILLIAM GALLOWAY, A.M., PH.D. GIESSEN, L.R.C.P., L.R.C.S. EDIN.

AT the age of seventy-nine, after having carried on practice as physician and surgeon, chiefly in Dundee, for thirty-three years, Dr. Galloway rested from his labours on the 26th ult. He was born in Arbroath, and received his preliminary education in his native town. From thence he proceeded to Edinburgh, where he succeeded in obtaining his degree in Arts, and subsequently the conjoint diploma of the Scottish Colleges. His first professional appointment was to the post of assistant surgeon to the Preston Hospital, Lancashire, which, however, he resigned after a few months' tenure and returned to his native town, where he carried on practice for a short time. An opening having occurred in Friockheim, he set about the work of establishing a nucleus there, which gradually increased until he found himself the repository of the health interests of an extensive *clientèle*. Meanwhile he was entrusted with the medical care of the poor of the parish of Kirkden. At Friockheim he remained for some fifteen years. In 1858 Dr. Galloway was chosen to act as out-door surgeon to the Dundee Royal Infirmary, and after two years' service in that capacity he decided to relinquish that post in favour of the district medical officership of the parochial board, an appointment which he held until his death. He was an accomplished linguist, being familiar with both classic and modern literature. He was also a religious man, and took great interest in all matters connected with the philanthropic work of the Free Church, of which he was a member. As an author he was well known, his book entitled "Dissertations on the Philosophy of the Creation" being very widely read, whilst his treatise "On Reflex Paralysis" was held in esteem by many of his medical *confrères*. He will be greatly missed by a large number of friends, both lay and medical. He leaves a widow, two sons, and two daughters.

FOOTBALL CASUALTIES.—On Saturday last the following cases were admitted to the Leeds Infirmary. A forward of the Leeds Club fractured his leg in a match at Hunslet between Leeds and Hunslet; at Headingly, in a match between the A teams of Leeds and Hunslet, a player sustained "concussion of the brain"; and during a match at Bramley a player violently collided with another player, and on his admission to the infirmary was found to be suffering from "internal injuries."

Medical News.

EDINBURGH UNIVERSITY.—In the Department of Public Health the degree of Bachelor of Science was, on Oct. 28th, conferred upon the following:—

Charles Hubert Bond, M.B. (*in absentia*); James Kemp Brown, M.B., William Thomas Crawford, M.B., Ahmed Mirza, M.B., and David Duncan Tindal, M.B.

The degrees of Bachelor of Medicine and Master in Surgery were conferred as follows:—

Frank Oliphant Bell, England; William Carr, England; William Briggs Clarke, Barbados; Duncan Menzies Conacher, Scotland; Albert Ernest Dent, England; Edward Percival Dickin, England; Rolland Atkinson Dove, England; Peter Galstaun Edgar, Straits Settlements; Charles Reginald Edmondson, England; William Forsyth, Scotland; William Hamilton Gaunt, Australia; Hugh Frederick Green, England; Frederic Pollington Hearder, Wales; George Hodges, New Zealand; James Kyd Duncan Ingram, Scotland; Oswald Hanson Isard, England; Dugald Shaw Johnston, Scotland; Charles William Aberdeen Jones, Australia; Evan Jones, Wales; John Gordon Leslie, Scotland; Arthur Hamilton Lowe, England; Donald Macdonald, Scotland; Alexander Gray M'Intyre, Scotland; Henry Deedes Nutt Mackenzie, England; Joseph Michael, Armenia; Edwin Arthur Mills-Roberts, Wales; Thomas Pullar Monteath, B.A., Canada; James Lennox Irwin Moore, England; Robert Dudley O'Neale, Barbados; John Lloyd Owen, Wales; Frank Swarbrick Park, England; John Hodge Phyn, Scotland; Augustus Francis Meredith Powell, South America; Malcolm MacGregor Rattray, Scotland; Henry Argyll Robertson, Scotland; Abraham Hepworth Robinson, England; Alexander Aitken Ross, Scotland; George Calrow Sandford, England (*in absentia*); Alexander Campbell Smith, Scotland; Riccardo Stephens, England; Rup Kishore Taadan, India; William Atkinson Taylor, Scotland; Thomas James Thomson, Scotland; John Albert Thorne, West Indies; Arthur Charles Turner, England; Robert Blackie Wallace, England; Godfrey Warnes, England; and Harry Weighton, Scotland.

ROYAL UNIVERSITY OF IRELAND.—The following degrees were conferred last week by the Pro Vice-Chancellor of the University:—

M.D. Degree.—Martin Joseph Dempsey (Gold Medal), Eleonora Lilian Fleury (Gold Medal), Andrew Fullerton, Richard Eugene Harcourt, Michael Cornelius Staunton, and John Joseph Tobin.

B.A.O. Degree.—Richard Eugene Harcourt, and John McIlroy.

M.B., B.Ch., and B.A.O. Degrees.—William Dunlop Donnan, Patrick King Joyce, Thomas Sinclair Kirk, Michael Hugh Aicken, Thomas William Atkinson, Eliza Gould Bell, Charles Leo Birmingham, Thomas Joseph Connolly, Joseph Albert Corbitt, James Henry De Blaquiere, James John Fitzgerald, William John Forbes, Patrick Gill Griffith, George William Griffiths, Joseph McGrath, Robert John McKeown, William McMath, Henry M. Macnaughton-Jones, John Mathewson, William Moody, John Edward O'Connor, Henry Lawrence Ormerod, John Patrick, Michael J. Ryan, William Terence Scanlan, and John H. Thompson.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following have passed the Final Examination under the Conjoint Scheme:

J. Behane, N. B. McJ. Blackham, S. E. M. Butler, E. Cairns, Henry Carre, W. J. Coneys, L. F. Corbet, W. S. Crosthwait, T. E. Dobbs, J. F. Duffy, G. F. J. Luther, A. J. Morran, J. T. B. O'Brien, C. B. Rothwell, and R. Somerville.

Passed in Medicine, Section A.—J. J. O'Donnell and W. F. Roe.

Passed in Surgery, Section B.—F. J. Mathews, Denis Molyneaux, J. J. O'Donnell, and W. F. Roe.

Passed in Midwifery, Section C.—J. C. Harte.

THE distress and misery prevailing in Leghorn from the paralysis of all business during the cholera epidemic have now reached such a height that a subscription has been opened on behalf of the sufferers. Tuscany appeals to the other provinces of Italy for help to enable the Livornese authorities to tide over the crisis.

ROYAL MICROSCOPICAL SOCIETY.—At a meeting on Wednesday, Oct. 18th, Mr. A. D. Michael, F.L.S., President, in the chair, Mr. J. G. Grenfell described some marine diatoms, recently found at Plymouth, belonging to the genera Meloriva and Surivella, which were of interest owing to the presence of pseudopodia.—Mr. A. W. Bennett objected to the term "pseudopodia" being applied to these processes unless it could be shown that they were actual prolongations of the internal protoplasm.—Mr. T. Comber said that Professor Grunow was of the opinion that the processes were spines.—Mr. E. M. Nelson exhibited and described a new model of a microscope by Messrs. Watson.—Mr. F. Chapman read Part V. of his paper on the Foraminifera of the Gault of Folkestone.—Professor Bell gave a *résumé* of a paper by Dr. R. L. Maddox on Progressive Phases of the Spirillum Volutans. The writer had traced the development of this organism and had discovered some points which appeared to be entirely new in the history of bacteria.

MEDICAL PRACTITIONERS' ASSOCIATION. — It is proposed to hold meetings of the Medical Practitioners' Association once a month during the winter for the discussion of medico-political questions. The first meeting will be held on Tuesday, Nov. 7th, at 4 P.M., at Exeter Hall, Strand, when the President, Dr. Frederick H. Alderson, will open a discussion on "The Remuneration of Medical Men." The presence of other medical practitioners than those who are members of the Association will, we are informed, be welcomed.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—The next meeting of this Society will be held on Nov. 9th, when Dr. Henty, the President, will deliver a short address. Cases and morbid specimens will be shown. Dr. Clifford Beale will bring forward a case of hemi-chorea, Mr. Arthur Wilson will show a specimen of secondary growths in bones following a tumour of the thyroid gland, and Dr. C. B. Styles will introduce a preparation illustrating a case of extra-uterine fœtation. Dr. Wynn Westcott will propose a resolution, postponed from the last meeting, to the effect that the first annual dinner should be held on the first Friday in February, 1894, at the Holborn Restaurant. At the meeting next week a ballot for the election of new members will take place.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—The following office-bearers have been elected for the ensuing year:—President: G. H. Kidd. General Secretary: William Thomson. Secretary for Foreign Correspondence: J. W. Moore. Medical Section—President: Walter G. Smith. Council: Wallace Beatty, J. Hawtrey Benson, E. M'Dowel Cosgrave, James Craig, J. Magee Finny, Richard A. Hayes, J. W. Moore, A. N. Montgomery, J. O'Carroll, and H. C. Tweedy. Surgical Section—President: Edward Hamilton. Council: C. B. Ball, Kendal Franks, Henry Fitzgibbon, John Lentaigne, Austin Meldon, Thomas Myles, Sir William Stokes, W. Thornley Stoker, R. L. Swan, and W. I. Wheeler. Section of Obstetrics—President: R. D. Purefoy. Council: L. Atthill, Robert A. Flynn, R. H. Fleming, A. J. Horne, F. W. Kidd, J. L. Lane, S. R. Mason, Arthur J. Macan, A. J. Smith, and W. J. Smyly. Section of Pathology—President: J. Alfred Scott. Council: A. W. W. Baker, A. H. Benson, H. Bewley, J. Magee Finny, Edmund J. M'Weeney, Conolly Norman, J. O'Carroll, A. R. Parsons, J. M. Purser, and J. B. Story. Section of Anatomy and Physiology—President: Alex. Fraser. Council: A. Birmingham, H. Broomfield, D. J. Coffey, D. J. Cunningham, H. C. Earl, and R. H. Woods. Section of State Medicine—President: Edgar Flynn. Council: E. McDowel Cosgrave, Thomas Donnelly, Ninian Falkiner, J. W. Moore, J. M. Redmond, and H. C. Tweedy.

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK.—On Wednesday, Oct. 25th, the past and present medical staff of the City of London Hospital for Diseases of the Chest dined together at Limmer's Hotel. Deep regret was expressed at the sad event which had deprived them of the presence of Sir Andrew Clark, who joined the Victoria-park Hospital as assistant physician in 1855, and was now one of the consulting physicians. Sir Andrew Clark was not an infrequent visitor to the hospital to see interesting cases of fibroid phthisis in the wards. Mr. Erichsen, consulting surgeon to the hospital, and surgeon in the year 1848, was unfortunately prevented from being present at the dinner. About fifty of the past and present staff were present, several of whom had come a long distance and had left large practices in order to meet their friends and former colleagues. The chair was occupied by Dr. Thorowgood, the senior physician to the hospital. The treasurer, Mr. Olding, the secretary, Captain Storrar Smith, and the head of the pharmacy department, Mr. Harvey, were present as guests, and made excellent speeches, Mr. Olding replying to the toast of "The Hospital," proposed by the chairman. Mr. Macready, in eloquent terms, gave the health of the past medical staff, to which Dr. Church responded; the acting medical staff, proposed by Dr. S. West, found an able representative in Dr. Heron; while among other speakers were Dr. Clifford Beale, Sir Hugh Beevor, Dr. Glover Lyon, Dr. Arnold Chaplin, the secretary, and Mr. Harvey. The musical part of the entertainment was most ably sustained by Dr. West, Dr. Fyffe, Dr. Harsant, Mr. Gay and Dr. Simmons. These gentlemen responded to the frequent calls made upon them with untiring energy, and it was not until a late hour that the company separated, all hoping that this their first staff dinner might in due time be repeated.

CAMBRIDGE UNIVERSITY.—Mr. Frank Papillon Haviland (Pembroke) has received the degree of Doctor of Medicine.

THE Alvarenga Prize of the College of Physicians of Philadelphia will be awarded on July 14th, 1894, provided that an essay deemed by the committee of award to be worthy is submitted. The essay may be written upon any medical subject, but must not have been previously published.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.—The following medals have been awarded:—Osteology, Charles Vahey; Junior Anatomy, David Spillane; Senior Anatomy, Joseph Frengley; Junior Physiology, Augustine Magner; Senior Physiology, Louis Crinion; Histology, Robert Joyce; Chemistry, Gerald Kearney; Medicine, William Dargan; Surgery, Bernard Coyle; Midwifery, Henry de Blaquiere; Pathology, James Fitzgerald; Materia Medica, Robert Joyce; Elementary Physics, Daniel Farrell; Elementary Biology, Francis Heffernan.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—At the annual general meeting of this Society the following officers were elected for the ensuing year:—President: John MacGavin, L.R.C.P. Edin. Vice-Presidents: Peter Cooper, L.R.C.P. Lond., and Charles H. Hartt, L.R.C.P. & S. Irel. Council: A. Stewart Brown, F.R.C.S. Edin.; Wm. Arbuthnot Lane, M.S. Lond., F.R.C.S.; John Gordon Mainwaring, M.R.C.S. Eng.; William Nicholson, M.D. Edin.; Charles James Parke, M.R.C.S. Eng.; F. S. Smyth, F.R.C.S. Edin.; and Francis T. Tayler, M.B. Lond. Treasurer: Prior Purvis, M.B. Lond. Secretary: Ernest Clarke, M.D., B.Sc. Lond. Librarian: E. H. Ezard, M.D., D.Sc. Edin.

THE CANADIAN MEDICAL ASSOCIATION.—The following have been elected as officers of this Association for the Session 1893-94:—President: T. T. S. Harrison, of Selkirk, Ontario. Vice-Presidents: Ontario, F. R. Eccles, of London; Quebec, J. Stewart, of Montreal; New Brunswick, J. Christie, of St. John; Nova Scotia, W. S. Muir, of Truro; Manitoba, R. Spencer, of Brandon; North-west Territories, F. H. Mewburn, of Lethbridge; Prince Edward Island, F. B. Taylor, of Charlottetown; British Columbia, R. E. McKechnie, of Nanaimo. General Secretary, F. N. G. Starr, of Toronto. Local Secretaries: Ontario, I. Olmsted, of Hamilton; Quebec, J. V. Anglin, of Montreal; New Brunswick, M. McLaren, of St. John; Nova Scotia, R. A. H. McKeen, of Cow Bay; Manitoba, A. McDiarmid, of Winnipeg; North-west Territories, Calder, of Medicine Hat; Prince Edward Island, Johnston, of Charlottetown; British Columbia, Walker, of New Westminster. Treasurer: H. B. Small, of Ottawa. The meetings during 1894 will be held at St. John, N.B.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDERSON, W. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fillongley Sanitary District of the Meriden Union, vice Westwood, resigned.

ANDERSON, W. H., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Resident Medical Officer of St. Vincent's Hospital, Dublin.

ARNISON, W. D., M.D., B.S., M.R.C.S., L.R.C.P., has been appointed Anæsthetist to the Royal Infirmary, Newcastle-on-Tyne, vice W. Baigent, M.D., resigned.

BARR, W. H., L.R.C.P., L.M., L.R.C.S., has been reappointed Medical Officer of Health for the Bury Rural Sanitary District.

BEATTIE, T., M.B., B.S., has been appointed Senior House Physician to the Royal Infirmary, Newcastle-on-Tyne, vice W. D. Arnison, M.D., resigned.

BROWN, R. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S., L.M. Glasg., has been appointed Medical Officer of Health for the Willington Urban Sanitary District, vice Allen.

CARSWELL, JOHN, L.R.C.P., L.F.P.S. Glasg., has been appointed Medical Officer to the Glasgow Public Dispensary.

COWPER, JOHN, M.B., C.M. Edin., has been appointed Medical Officer of Health to the Shanklin Local Board.

ELLISON, A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the General Infirmary, Leeds.

FIRTH, E. G., L.S.A., has been appointed Resident Medical Officer to the Ida Hospital, Leeds.

FRASER, D. A., M.D. Brux., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Totnes.

HARSANT, J. G., M.D. Lond., B.S., has been appointed Medical Officer to the Royal Victoria Hospital, Bournemouth.

HOSEGOOD, SAMUEL, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health to the Swinton and Pendlebury Urban Sanitary District.

HOUSTON, E., M.R.C.S., L.R.C.P., has been appointed Resident Obstetric Officer to the General Infirmary, Leeds.

HOWDEN, ROBERT, M.B., C.M. Edin., has been appointed Professor of Anatomy to the University of Durham.

INNES, EDWARD, M.B., C.M. Edin. Univ., has been appointed Medical Officer to the Nayar Brigade, Travancore, India.

JACKSON, D. N., M.B., B.S., has been appointed House Surgeon to the Royal Infirmary, Newcastle-on-Tyne, vice W. H. Bishop, M.B., B.S., resigned.

JACOB, HENRY W., M.A., M.D. Dubl., has been appointed Honorary Physician to the Taunton and Somerset Hospital, vice John Currie, M.D., deceased.

JARDINE, ROBERT, M.D. Edin., M.R.C.S., has been appointed Lecturer on Midwifery and Gynæcology to the Lady Missionary Training Home, Westercraigs, Glasgow.

JARDINE, ROBERT, M.D. Edin., M.R.C.S., has been appointed Physician for Diseases of Women and Children to the Public Dispensary, Glasgow.

JONES, BENJAMIN EVANS, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Lecturer to the County Council Technical Instruction Committee (Kirkham and District Centre) on Sick Nursing and Ambulance for the Winter Session 1893-94.

KEELE, DAVID, M.R.C.S., L.R.C.P., has been appointed Hon. Surgeon to the Holloway and North Islington Dispensary.

LAKE, WELLINGTON, M.R.C.S., has been appointed Deputy Medical Officer, Guildford, vice Clarke, resigned.

MACASKIE, J. G., L.R.C.P., L.R.C.S. Edin., D.P.H., has been appointed Medical Officer of Health to the Belford Rural Sanitary District.

MACPHEE, A., M.D., C.M., F.F.P.S. Glasg., has been reappointed Physician to the Glasgow Public Dispensary.

MORSE, EDWARD, L.R.C.P., L.R.C.S. Edin., has been reappointed Medical Officer of Health for Great Torrington.

NESBITT, R. G., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer for the Second Sanitary District of the Penzance Union, vice Searle, resigned.

OLDFIELD, C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the General Infirmary, Leeds.

RAMAGE, A., L.R.C.P., L.R.C.S. Edin., L.M., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Unst.

SCALLON, E. O., M.R.C.S., has been reappointed Medical Officer of Health for the Templecombe Sanitary District of the Wincanton Union.

SHAW-MACKENZIE, A. C., L.S.A., has been appointed Assistant Medical Superintendent to the Fulham Union Infirmary, W.

SMURTHWAITE, H., M.B., B.S., has been appointed Junior House Physician to the Royal Infirmary, Newcastle-on-Tyne, vice T. Beattie, M.B., resigned.

STEPHENS, L. E. W., M.R.C.S., has been reappointed Honorary Medical Officer to the Emsworth Cottage Hospital.

STONEY, W. W., M.B. Vict., has been appointed House Physician to the General Infirmary, Leeds.

SWANSON, JAMES, M.B., C.M. Glasg., has been appointed Medical Officer to the Glasgow Public Dispensary.

THOMSON, W. E. F., M.B., C.M. Edin., has been appointed Medical Officer to the Glasgow Public Dispensary.

WILSON, J. C., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Haworth Sanitary District of the Keighley Union, vice Arlidge.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon, unmarried, or, if married, without family. Salary £180 per annum, with partly furnished house, coal, and gas.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-street, E.C.—Senior Resident Medical Officer. Salary £70, with board, washing, and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer required as House Physician for six months, unmarried. Salary £20, with board and residence in the hospital.

HOSPITAL FOR WOMEN, Soho-square, W.—Assistant Physician.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House Surgeon. Salary £50 a year, with board and lodging.

OLDHAM INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, lodging and washing.

ST. LUKE'S HOSPITAL, LONDON, E.C.—Clinical Assistant for six months. Board and residence provided.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House Surgeon for two years. Salary £100 per annum, with board, lodging, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SUNDERLAND INFIRMARY.—House Physician. Salary £80, rising £10 annually to £100, with board and residence.

SURREY DISPENSARY, Great Dover-street, S.E.—House Surgeon, unmarried. Salary £120 per annum, with furnished apartments, coal, gas, and attendance.

THE LONDON THROAT HOSPITAL (FOR DISEASES OF THE THROAT, NOSE, AND EAR), 204, Great Portland-street, W.—Junior Assistant Surgeon.

UNIVERSITY COLLEGE HOSPITAL, Gower-street, W.C.—Senior Dispenser. Salary £150 per annum, and half the fees paid by dispensary pupils.

Births, Marriages and Deaths.

BIRTHS.

BLACKLER.—On Oct. 27th, at Royal-avenue, Sloane-square, the wife of H. J. Blackler, M.B., of Redhill, Surrey, of a son.

BROWNE.—On Oct. 23th, at Amesbury, Wilts, the wife of Henry Browne, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of a daughter.

CUTFIELD.—On Oct. 27th, at Merton House, Ross, Herefordshire, the wife of Arthur Cutfield, B.A., B.Sc., M.R.C.S., L.S.A., of a son.

FOWLER.—On Oct. 24th, at Trevor Lodge, Thornton Heath, the wife of C. Owen Fowler, M.D., of a son.

HARRIS.—On Oct. 29th, at the Infirmary, East Dulwich, the wife of H. Elwin Harris, B.A., M.B. Cantab., of a daughter.

MCBRIDE.—On Oct. 26th, at The White House, Berkhamsted, the wife of Dr. J. B. McBride, of a son.

RUSSELL.—On Oct. 28th, at 4, Queen Anne-street, Cavendish-square, W., the wife of J. S. Risien Russell, M.D., M.R.C.P., of a daughter.

MARRIAGES.

BIRD—MORTIMER.—On Oct. 24th, at St. Mary Magdalene's Church, Paddington, by the Rev. W. H. Bleaden, vicar, assisted by the Rev. Douglas Braginton, cousin of the bridegroom, and the Rev. C. F. Reeks, the Rev. Harold Braginton Bird, M.A., only son of Dr. Bird, M.R.C.P. Lond., of West Brighton, to Georgina Edith Mortimer, eldest daughter of the late Lieutenant-Colonel Thomas Bythesea Mortimer, of the 21st Royal North British Fusiliers and 70th Regiments, and latterly of Her Majesty's Royal Bodyguard.

ENGLISH—RIDAL.—On Oct. 26th, at St. John's, Cheltenham, by the Rev. A. Armitage, M.A., Thomas Harks English, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of Holderness-road, Hull, and son of the late A. W. English, J.P., of Whitby, to Anna Louisa, youngest daughter of the late A. Ridal, Esq., of Stocksbridge Hall, Yorkshire.

FRASER—CODRINGTON.—On Oct. 25th, at St. Stephen's, Twickenham, Alexander Fraser, M.B., C.M., of Carlton, Nottingham, to Emily Marianne, daughter of Thomas Codrington, of 5, Riverdale-road, Twickenham-park.

HINNELL—SCOTT.—On Oct. 24th, at St. Michael's Church, Cambridge, Joseph Squier Hinnell, M.D. Cantab., Bury St. Edmunds, to Emma Mary, second daughter of David J. Scott, The Bank, Trinity-street, Cambridge.

JOSEPH—GLYDE.—On Oct. 25th, at the Congregational Church, Saltaire, Arthur Hill Joseph, M.B. Lond., of Cardiff, to Gertrude Helen Taylor Glyde, third daughter of the late W. E. Glyde, of Moorhead, Saltaire.

MADDOX—MONTEATH.—On Oct. 27th, at The Broich, Crieff, Ernest Edmund Maddox, M.D., of Edinburgh, to Grace Rivers M'Laurin, second daughter of the late Alexander M'Laurin Monteath, Esq., C.S.I., H.M.'s Indian Civil Service, of The Broich and Duchally, Perthshire.

MATHEWS—GUEST.—On Oct. 26th, at Christchurch, West Bromwich, by the Rev. A. Solly, assisted by the Rev. G. E. Lithgow, Frank Edward Mathews, M.R.C.S., L.R.C.P., son of William Mathews, M.D., F.R.C.S., of Manor House, Nantwich, to Lizzie Ethel, fourth daughter of Josiah Guest, of Halton House, West Bromwich.

POOLE—LEE.—On Oct. 25th, at the parish church of St. Marylebone, Kenneth Worsley Poole, M.B., B.S., M.R.C.S. and L.R.C.P. Lond., of Palace-mansions, Addison-bridge, Kensington, to Alice Charlotte, daughter of John Lee, Esq., of Sydenham-road, Croydon.

DEATHS.

DALY.—On Oct. 28th, at Kingston-Bagpuize, Abingdon, Joseph Harding Daly, surgeon, aged 57.

DOUGLAS.—On Oct. 25th, at Tantallon, Justyn George Durham Douglas, M.D., aged 44.

EATON.—On Oct. 30th, at his residence, 9, Portland-terrace, Regent's Park, Freeman James Eaton, M.R.C.S., aged 60.

MACKENZIE.—On Oct. 1st, at Darjeeling, Brigade-Surgeon Lieutenant-Colonel Stephen Coull Mackenzie, M.D., F.R.C.S.E., F.R.C.P.E., Bengal Medical Service, aged 51.

NEDWILL.—On Aug. 29th, suddenly, at Christchurch, New Zealand, Ada Mary, wife of Courtney Nedwill, M.D., aged 45.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.

Proceedings of the West London Medico Chirurgical Society. Vol. V. Sessions 1890-91 and 1891-92. Edited by L. Mark and A. S. Eccles, M.B. 1893. pp. 122.

Cancer and its Complications. By C. Egerton Jennings, M.D. M.S., F.R.C.S. Eng. Second Edition. 1893. pp. 154. Price 3s. 6d. net.

BLACKIE & SON, London, Glasgow, and Edinburgh.

Gold, Gold, in Cariboo: A Story of Adventure in British Columbia. By Clive Phillipps-Wolley. Illustrated. 1894. pp. 288. Price 3s. 6d.

A Jacobite Exile: Being the Adventures of a Young Englishman in the Service of Charles XII. of Sweden. By G. A. Henty. Illustrated. 1894. pp. 352. Price 5s.

St. Bartholomew's Eve: A Tale of the Huguenot Wars. By G. A. Henty. Illustrated. 1894. pp. 384. Price 6s.

Wreck of the Golden Fleece: The Story of a North Sea Fisher-Boy. By Robert Leighton. Illustrated. 1894. pp. 352. Price 5s.

Through the Sikh War: A Tale of the Conquest of the Punjaub. By G. A. Henty. Illustrated. 1894. pp. 384. Price 6s.

The White Conquerors of Mexico: A Tale of Toltec and Aztec. By Kirk Munroe. Illustrated. 1894. pp. 352. Price 5s.

CHATTO & WINDUS, Piccadilly, London.

Rujub, the Juggler. By G. A. Henty. New Edition. Illustrated. 1893. pp. 332. Price 5s.

CHURCHILL, J. & A., New Burlington-street, London.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. XIII. Session 1892-93. With List of Officers, Members, &c. 1893. pp. 301. Price 12s. 6d.

COX, HORACE, Bream's-buildings, Chancery-lane, London, E.C.

Tales in Verse. By J. A. Goodchild. pp. 260.

FERET ET FILS, Bordeaux.

Chirurgie des Voies Urinaires. Études Cliniques. Par le Dr. E. Loumeau. Second Edition. 1894. pp. 300.

HIRSCHWALD, AUGUST, Berlin.

Diagnostik der Harnkrankheiten. Zehn Vorlesungen zur Einführung in die Pathologie der Harnwege. Von Dr. C. Posner, Berlin. 1894. pp. 160.

Arbeiten aus dem Pathologischen Institut in Göttingen. Herrn Professor Rudolf Virchow gewidmet von Professor Johannes Orth. 1893. pp. 267.

LONGMANS, GREEN, & CO., London.

Transactions of the Clinical Society of London. Vol. XXVI. 1893. pp. 265.

MACLEHOSE & SONS, Glasgow.

Pyogenic Infective Diseases of the Brain and Spinal Cord. By William Macewen, M.D. 1893. pp. 354.

Atlas of Head Sections. With Copperplates. By William Macewen, M.D. 1893.

MURRAY, JOHN, Albemarle-street, London.

A Handbook for Travellers in New Zealand. By F. W. Pennefather, LL.D. Illustrated. 1893. pp. 172. Price 7s. 6d.

THE NEW SYDENHAM SOCIETY, London.

Paludism. By Dr. A. Laveran. Translated by J. W. Martin, F.R.C.P.E. 1893. With plates. pp. 197.

A Treatise on Gynæcology, Clinical and Operative. By S. Pozzi, M.D. Vol. III. 1893. pp. 520.

WOOD, WILLIAM & COMPANY, New York.

Supplement to the Reference Handbook of the Medical Sciences. By various writers. Edited by A. H. Buck, M.D. Vol. IX. 1893. pp. 1076.

A New Instrument for the Treatment of Difficult Strictures of the Urethra: by A. G. Miliar, F.R.C.S.E. (Oliver & Boyd, Edinburgh).—Revue de Chirurgie: October, 1893 (Felix Alcan, Paris).—The Journal of Anatomy and Physiology, Normal and Pathological, Part I.; October, 1893; illustrated (Chas. Griffin & Co., London), price 6s.—The Sanitary Journal: a Journal of Hygiene and Public Health, New Series: Oct. 18th, 1893 (Alex. Macdougall, Glasgow).—Earth to Earth: a Plea for a More Rational Observance of the Conditions proper to the Disposal of the Dead: by Francis S. Hayden, F.R.C.S.; third edition (E. Stanford, Charing-cross, London, S.W.), price 6d.—Sonderabdruck aus der Berliner Klinischen Wochenschrift, 1893, No. 40 (L. Schumacher, Berlin).—Duodecim, Helsinki, Lokakuu, 1893 (Suomal, Kirkjall, Seuran Kirjapainossa, Helsingissä).—Current Literature: a Magazine of Record and Review; September, 1893 (the Current Literature Publishing Co., New York).—Short Stories: a Magazine of Fact and Fiction; September, 1893 (the Current Literature Publishing Company, New York).—Archives of Surgery; October, 1893 (J. & A. Churchill, London), price 2s. 6d.—Longman's Magazine; November, 1893 (Longmans, Green, & Co., London), price 6d.—New System of Sanitary Drainage and Treatment of Sewage Matter: by Captain M. P. Nadiéine (Whittaker & Co., Paternoster-row, London, E.C.); 1893; price 1s.—The Matabele War: Map of Mashonaland and Matabeleland: by E. P. Mathers, F.G.S., F.R.G.S. (published at 23, Austin-friars, London), price 6d.—Archiv für Experimentelle Pathologie und Pharmakologie; Oct. 20th, 1893; 5. u. 6. Heft (F. C. W. Vogel, Leipzig).—Die Pathologische Histologie der Grosshirnrinden-Erkrankung: von Dr. Otto Binswanger (Gustav Fischer, Jena); 1893.—Cope's Mixture, selected from his Tobacco Plant; Cope's Smoke-room Booklets; No. 8 (published at the office of "Cope's Tobacco Plant," Liverpool, 1890); price 3d.—The Humanitarian League's Publications, No. 9: Dangerous Trades for Women: by Mrs. C. Mallet; 1893 (Wm. Reeves, Fleet-street, London), price 2d.—The Alleged Increase of Insanity: by C. S. W. Cobbold, M.D., F.R.C.P. Edin., M.R.C.S.; reprint (J. W. Arrowsmith, Bristol, 1893). Magazines for November: Sunday at Home, Leisure Hour, Boy's Own Paper, Boy's Out-door Games and Recreations, Girl's Own Paper, Girl's Own Out-door Book (Religious Tract Society).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, November 2nd, 1893.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 27	29·97	N.W.	43	42	85	55	42	—	Bright
,, 28	29·95	S.W.	51	50	71	59	43	—	Cloudy
,, 29	29·80	N.W.	53	50	92	58	50	—	Cloudy
,, 30	29·87	N.	43	42	77	51	42	..	Hazy
,, 31	30·09	N.W.	36	35	73	46	34	—	Hazy
Nov. 1	30·60	S.W.	36	35	61	52	31	..	Hazy
,, 2	29·71	S.W.	48	48	55	52	36	·25	Raining

Medical Diary for the ensuing Week.

Monday, November 6.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2.30 P.M.; Friday, 2 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL. Ear and Throat Department, 9 A.M.: Thursday, 9 A.M. Eye Department, 2 P.M.

ROYAL EYE HOSPITAL, SOUTHWARK.—Hour of attendance, 2 P.M., and other days at the same hour. Operations daily.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Corneal Affections.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. J. W. Bond: Goitre (illustrated by cases).

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.)—5.30 P.M. Dr. Morgan Dockrell: Parasitic Diseases of the Skin.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Mr. Hopewell Smith: Some Observations on the Cellular Elements of the Pulp (with Slides). A casual communication by Mr. Arbuthnot Lane. The President will describe a New Form of Rubber-dam Holder.

Tuesday, November 7.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Skin Department, 1.45; Saturday, 9.15.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Dr. Payne: Seborrhœa and its consequences.—Bethlem Hospital: 2 P.M., Dr. Corner: Climacteric and Senile Insanity.

PATHOLOGICAL SOCIETY OF LONDON.—Mr. Berry: (1) Bullet-wound of Heart; (2) Wound of Carotid Artery.—Mr. Jackson Clarke: A New Phase of "Coccidium Oviforme."—Dr. Charlewood Turner: Intussusception.—Mr. F. C. Wallis: Angeioma of Scapular Region.—Mr. Clutton: Syphilitic Disease of Tibia.—Mr. Cecil Beadles: Lymphadenomatous Growth of Heart.—Dr. Lee Dickinson: (1) Crystals of Bilirubin from a Hydatid Cyst; (2) Kidney partly Hydro-nephrotic with Double Ureters (card specimen).

Wednesday, November 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30 A.M. Eye Department, 2 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Physical Diagnosis of Phthisis. Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. A. Q. Silcock: Glaucoma.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. Greville MacDonald: Rhinitis (illustrated by cases).

HUNTERIAN SOCIETY.—8.30 P.M. Clinical Evening. The President: Case of Insolatio.—Sir Hugh R. Beevor: Two cases of Persistent Systolic Murmurs over the Aorta and Pulmonary Artery respectively.—Dr. Fred. J. Smith: (1) Case of Paralysis of Left Face and Shoulder Muscles in a Man dating from Infancy; (2) Case of Cardiac Crisis(?) in Tabes Dorsalis.—Mr. T. H. Openshaw: Case of Filaria Sanguinis Hominis. And other cases.

Thursday, November 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department. 9 A.M. Eye Department. 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st.: 3.30 P.M.. Dr. Arthur Voelcker: Some Manifestations of Rickets.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Ormerod: Ataxia.—London Throat Hospital (Gt. Portland-st.): 8 P.M., Mr. W. R. H. Stewart: The Complications of Middle Ear Disease. Central London Sick Asylum: 5.30 P.M., Mr. John Hopkins: Cases in the Wards.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Card Specimens:—Messrs. Critchett and Juler: A case of Pemphigus of the Conjunctiva.—Mr. G. Anderson Critchett: A case of Conical Cornea treated by the Galvano-Cautery without Perforation.—Mr. Juler: A case of Central Colloid Changes in the Retina.—Mr. Frederick Bass: A Pocket Refraction Case. Mr. Bokenham: Note on Benzoyl-pseudo-tropeine. And other papers.

Friday, November 10.

UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Hector Mackenzie: Physical Diagnosis of Phthisis.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Frederick Taylor: A case of Disease of the Corpora Quadrigemina.—Mr. Mansell Moullin: Traumatic Arachnoid Hæmorrhage, with Symptoms on the same side as the Lesion.—Dr. C. E. Beevor: A case of Syphilitic Tumours of the Spinal Cord, with Symptoms simulating Syringomyelia.

Saturday, November 11.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr Percy Smith: Alcoholic Insanity.

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

PUBLISHER'S NOTICE.

IN order to facilitate the work of reference to the volumes of THE LANCET, we have arranged to publish duplicate copies of the Index to each half-yearly volume in a form in which they may be subsequently filed or bound together. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Publisher of THE LANCET.

FISH AND TUBERCULOSIS.

PROFESSOR COMBEMALE of the Faculty of Medicine of Lille, who has been experimenting with the object of ascertaining the possibility of fish transmitting tuberculosis to mammals, has found that fish after being fed with bread containing tubercle germs do not become tuberculous. The same negative result was obtained with fish that had lived in water infected with tuberculous sputa.

TREATMENT OF DIPHTHERIA BY INSUFFLATIONS AND TABLOIDS OF SULPHITE OF MAGNESIUM.

To the Editors of THE LANCET.

SIRS,—Considering the prevalence of diphtheria, and the mortality therefrom according to the Registrar General's report, it seems to be a very suitable occasion to submit to the medical profession a method of treatment which I adopted (I believe I may correctly say, discovered) some years ago, and which has met with never-failing success. This consists in the application of sulphite of magnesium (magnesii sulphis) to the part or parts affected by means of an insufflator. Not in any spirit of boastfulness, but merely as a matter of fact, I may state that, for nearly six years, by the aid of this remedial agent, I have not lost one patient suffering from this malady. It is not my intention in this short letter to enter into a technical disquisition on the subject; I shall merely make a few remarks on the treatment as practised by me with such success. Immediately on perceiving the slightest trace of diphtheritic secretion I apply the powder freely over the parts and continue to do so every hour, two hours, or three hours, according to the severity of the attack, until all symptoms disappear. If I have the assistance of a trained nurse I leave an insufflator with her and instruct her as to how to use it, contenting myself with a morning and evening visit. It is most necessary that the applications, especially in severe cases, should be made constantly. To obviate the difficulty experienced where assistance is unavailable I have placed myself in communication with Messrs. Burroughs, Wellcome and Co., and they have prepared for me tabloids of this drug, which I find to act most satisfactorily. I give chlorate of potassium and iron internally and order a liberal and nutritious dietary. It is with the most absolute confidence that I give it as my belief that if this method of treatment were to become universal the mortality from diphtheria would be reduced to a minimum. Permit me to add that Messrs. Burroughs, Wellcome and Co. have, at my suggestion, designed and perfected a tongue-depressing insufflator which, I believe, will be found to be very serviceable; moreover, by removing the tongue depressor surgeons will find themselves in possession of a very nice and handy instrument for dusting iodoform and other powders on wounds and limbs after operation &c.

I am, Sirs, yours truly,

BROWNLOW R. MARTIN, M.B. Dub. &c.

Shaftesbury-road, W., Oct. 28th, 1893.

Qualified Assistant would act rightly in refusing to be compromised by any coöperation with the covering of an unqualified assistant, past or present, by his principal. Whether he is entitled to recover his commission from the principal or the unqualified assistant in the cases mentioned depends on the exact nature of his contract with the principal, of which we have little knowledge. The membership of the Medical Defence Union is for defence of the member himself. We do not profess to know all the rules and objects of the Union. It is certainly opposed to covering, but we should advise our correspondent to settle his differences with his principal privately and amicably.

WANTED A DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—Will you kindly give your opinion on the following case?

A woman aged about thirty-five was suddenly attacked with severe pain in the sacral region. There was no swelling or fever or tenderness anywhere along the spine. Vaginal examination revealed no evidence of any tumour, fluctuating or otherwise, or pain. The uterus was fixed and immobile: fundus at pubis, and os bent downwards into concavity of sacrum. Abdominal examination was barren of results. Dry cupping, belladonna and chloroform liniment, bromides, with hyoscyamus &c. giving no relief, a hypodermic injection of morphia produced a few hours' sleep. A few small doses of iodide of potassium were given and a pessary inserted without relief. In consultation a moderate calomel and jalap purge was administered, and the morphia injection repeated in the evening. Next morning a uterine flux appeared, and a few petechiæ were observed on the abdomen. The pain continued to be agonising. Iron, digitalis and ergot were given, the hypodermic injections of morphia were continued, and the pessary was removed. Towards evening the spots increased, and by the following morning they covered the whole body, in some places discrete in others diffuse, while the skin itself appeared of an ashy, dusky hue. The prostration was extreme, the pulse feeble and intermitting, and the breathing hurried and gasping. Stimulants were freely given—such as champagne, ammonia, ether, nitro-glycerine &c.—from the earliest symptoms of failure, but the patient speedily collapsed. There was a history of spinal and uterine ailments, the patient being bedridden for years. She had a remarkably healthy appearance, with a slight tendency to *embonpoint*, and was subject to constant recurrences of severe pain in the "spine," which were relieved by fomentations and rest. Three consultants were called in, and the patient's intellect was clear to the last, death resulting from failure of the heart's action, from thrombus probably. The intensity of the sacral pain continued to the end, and though some fulness of the abdomen subsequently presented, no particular indications of pelvic or uterine hæmatocele were noticed. I am, Sirs, yours obediently,

Oct. 31st, 1893. AN ENQUIRER.

"THE FROG."

To the Editors of THE LANCET.

SIRS,—There is a comparatively common affection amongst infants of the country mothers of Lincolnshire which they name "the frog." It is an infantile stomatitis. As relevant to the subject "The Toad in Therapeutics," a letter on which appeared in THE LANCET of Oct. 14th, it will probably be of interest to your readers to know that a treatment for this affection is that of giving the infants a very small frog placed in a linen or muslin "pap" to suck.

Believe me, Sirs, yours obediently,

Guernsey, Oct. 16th, 1893. HAYDN BROWN.

THE LEAGUE OF PITY.

NO one can fail to sympathise with the efforts which are being made by philanthropic individuals to improve the condition, both physically and morally, of the juvenile population. There are several organisations of this kind, amongst them being the "League of Pity," which has for its object the prevention of cruelty to the children of the poor, although a case has lately been made public in which cruelty to children was not confined to the impoverished class. A paper published by the League has just reached us, and it is very satisfactory to note the amount of success which has attended the labours of the conductors of the enterprise, which can scarcely fail to be productive of much-needed good.

Dubious.—We scarcely see that B. was justified in refusing to meet C. on the grounds stated. It was more for C. and the husband of A., and for A. herself, to consider how far the relation of C. to A. affected his fitness to go minutely into A.'s case. But it was altogether natural that A.'s husband and friends should wish C. to be informed of the medical facts of the case and to give him the opportunity of making any suggestions for the treatment; and to this end a consultation between B. and C. would have been natural and fit.

Dr. Rentoul is thanked for a copy of a petition which he is promoting for presentation to the General Medical Council, at its approaching meeting, on the subject of the registration of midwives.

Dr. F. P. Atkinson.—The office of the "National Society for the Employment of Epileptics" is at 20, Hanover-square, London, W.

NEW INVENTIONS.

To the Editors of THE LANCET.

SIRS,—In response to your note in acknowledgment of our letter we beg most respectfully to say that we do not for one moment allow the impracticability of our suggestion—at all events to an open mind. With regard to an editor's time not being wholly unoccupied, this goes without saying. But we consider that if such a plan were adopted time would be saved; because, assuming that it is not the editor's desire to lend his aid either to intentional pirates or to those who do not know of prior claims, the assistance of rightfully interested persons would obviate the necessity of his in the first instance looking into the validity of claims to new inventions. We have the honour to enclose a list of articles which have appeared in the columns of THE LANCET, and also of claims which appear in the catalogue of another manufacturer. As for the latter we only tender the same for your perusal with the view of showing how widely the system of piracy prevails.

We have the honour to be, Sirs, your obedient servants,

Oxford-street, W., Oct. 28th, 1893. JOHN WEISS AND SON.

*.** Our correspondents fail to point out in what way it would be practicable for editors of medical journals to submit the various articles which claim to be new inventions to the surgical instrument makers throughout the kingdom. In cases of "piracy" surely the assistance of the law can be obtained.—ED. L.

"THE TREATMENT OF HABITUAL ABORTION BY CHLORATE OF POTASSIUM."

To the Editors of THE LANCET.

SIRS,—I have on several occasions successfully treated habitual abortion by chlorate of potassium, as mentioned by Dr. Pratt of Newcastle-on-Tyne in THE LANCET of Oct. 28th. The treatment is by no means new. Simpson strongly recommended chlorate of potash in cases in which the child habitually dies in the later months of pregnancy. Dr. Playfair, in his "Science and Practice of Midwifery," believes the drug to be unquestionably beneficial in cases of the kind, and says it may be given in doses of from fifteen to twenty grains three times a day. The treatment is also recommended by Leishman, Roberts, and Milne.

I am, Sirs, yours faithfully,

CHARLES J. SUTHERLAND, M.D. St. And., L.R.C.P. Edin.

South Shields, Oct. 30th, 1893.

"THE NEW DOCTOR."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to a note which appeared in THE LANCET of Oct. 14th concerning a paragraph which was inserted in a recent issue of my paper, the *Northern News*, regarding Dr. Charles G. Rae, Wick, who recently began practice here. I am responsible for the paragraph, and I do not think it contains anything that is inaccurate or that should be repressed. It is not every day that a new doctor starts practice in Wick, and all that the paragraph contained was simply an announcement of the fact and some information as to the doctor's curriculum and experience which I ascertained upon inquiry, as the doctor was quite unknown to me. I feel that this explanation is due to Dr. Rae. I am, Sirs, yours truly,

Wick, Oct. 28th, 1893. WM. SUTHERLAND.

*.** We are glad to say that we have also received a letter from Mr. Rae stating that he had absolutely nothing to do with the paragraph in question.—ED. L.

A FATAL CASE IN MIDWIFERY.

To the Editors of THE LANCET.

SIRS,—Dr. West, the obstetric lecturer at St. Bartholomew's Hospital in my student days, was in the habit of warning his class that should they find a woman about to be confined who had a foreboding that it would prove fatal to her they "must be especially in such a case on the watch." So it was with me in the case which I am about to record.

On Oct. 16th I was called to attend Mrs. ——, a pale, emaciated, but intelligent woman, whom I had attended previously ten times—seven craniotomy cases and three forceps cases. Although this was her eleventh confinement she had not completed her twenty-ninth year. Upon entering her room she addressed me in Welsh: "Dyma y tro diwedda' am byth i chwi. Rhaid i mi farw 'rwan." ("This is your last time for ever with me. I must now die.") My endeavours to reassure her were quite unavailing. Upon examination I found a head in the pelvis, and as the patient had not a single labour pain I gave her a dose of ergot, which was at once rejected; then the forceps were applied, by which means the child was born—dead. Further manipulation manifested another obstruction in utero, which, having waited awhile, proved to be an arm presentation of a second child. I then introduced my left hand and easily gripped a foot and delivered. This child was also dead. The patient now became deathly pale and pulseless, though there was no hæmorrhage to account for it; but when I was about to remove the placenta a foot of a third child was presenting. Having found out that there was a third to be delivered, the patient begged of me to let her die with it, without any further interference on my part. Having brandy at hand, I gave two ounces in hot water, and having waited for a time and finding no change for the better, I proceeded to deliver the third child; but when it was on the verge of being expelled the patient turned to me and exclaimed, "I am dying; God bless you," and instantly died from sheer exhaustion.

I am, Sirs, yours faithfully

Brynmeurig, Bethesda. JNO. WILLIAM.

A SIMPLE INTESTINAL CLAMP.

To the Editors of THE LANCET.

SIRS,—Every surgeon interested in intestinal surgery recognises the difficulties experienced in meeting with a clamp which will answer the purposes intended and which will not slip. At an intestinal operation recently I devised the following most simple but yet most effectual plan:—"Push through the mesentery at a short distance above and below the site of the proposed resection the pointed, closed end of a pair of Spencer Wells' small pressure forceps; open stem; catch between the serrated points the loop of a strong flat indiarubber band having a lumen of the diameter of an inch or more; now close the forceps with the catch, and pass the unattached portion of the indiarubber over the intestine and then over one of the handles of the closed forceps." I claim for this simple plan the following advantages:—(1) It requires no special instrument; (2) it is easy of application; (3) it is easy of removal; (4) it is quite effectual; (5) it will not slip, being held by the mesentery. I am, Sirs, yours very truly,

HENRY THOMPSON,
Surgeon to the Hull Royal Infirmary.

Albion-street, Hull, Oct. 28th, 1893.

THE following circular has been sent to the patient of a practitioner in a suburb of the north-east of London. We need not comment on it:—

"Surgery and Dispensary, 4, Five Elms-terrace, Clapton-pavement. Consulting hours: Morning, 10 to 1; evening, 6 to 9. Fees: Advice and medicine at surgery, 9*d.*; visit and medicine, 1*s.* 6*d.*; midwifery, 15*s.* The medical officer is a fully qualified physician, surgeon, and accoucheur. N.B.—Urgent cases attended at any time."

REFERRING to our article on the subject of "Fuel Economy, Smoke Prevention, and the Utilisation of Heat" published in our last issue, several correspondents have asked us for the address of Messrs. Leggott and Marsh. The address is 28, Market-street, Bradford, or 100, Shaftesbury-avenue, London.

M.R.C.S.—Such matters are not, we believe, quite those contemplated by the Medical Defence Union.

COMMUNICATIONS not noticed in our present issue shall receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Evening Post (New York), Faversham News, Brighton Guardian, York-shire Post, Liverpool Daily Post, Leeds Mercury, Bristol Mercury, Rangoon Times, Rochdale Observer, Northern Daily Telegraph, Western Morning News, Wolverhampton Chronicle, Birmingham Gazette, Bradford Observer, Scotsman, Glasgow Herald, South Wales Daily News, Le Temps (Paris), Eastern Daily Press, Manchester Courier, Zoophilist, Scottish Leader, City Press, Mining Journal, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Hertfordshire Mercury, Sanitary Record, Reading Mercury, Local Government Chronicle, Local Government Journal, Romford Herald, Surrey Advertiser, Western Chronicle, Roman Herald, West Middlesex Advertiser, Cambrian (Swansea), Folkestone Advertiser, Times of India, Pioneer Mail, Builder, Architect, Medical Record (New York), Leith Herald, West London News, Belfast News Letter, Durham Chronicle, Sunday Times, Sussex Daily News, Loughborough Monitor, Cheltenham Chronicle, Public Health, Citizen, Westminster Gazette, Irish Times, Kendal News, &c. &c.*

Communications, Letters &c. have been received from—

A.—Mr. J. W. Agnew-Hobart, Tasmania; Messrs. Arnold and Sons, London; Australia, Our Correspondent.

B.—Dr. Buzzard, London; Dr. A. H. Boucher, Hertford; Dr. Robert Bell, Glasgow; Mr. T. Bond, London; Mr. R. J. Bedford, Kegworth; Mr. E. Bronsdon, London; Messrs. Brown, Gould, and Co., London; Messrs. R. Bentley and Son, London; Berlin, Our Correspondent; B. C. Y., London.

C.—Dr. P. J. Cook, Brighton; Dr. W. H. Corfield, London; Mr. W. H. Cuthbert, Aberdovey; Mr. Ernest Clarke, London; Mr. R. Courteen, Huelva, Spain; Church of England Sanitary Association, Secretary of; Canadian Medical Association, St. John, N.B., Secretary of; Cambrian Newspaper Co., Limited, Proprietors of.

D.—Dr. J. Elliott, Chester; Messrs. Eyre and Spottiswoode, London.

F.—Dr. C. Frere, Philadelphia; Mr. T. F. Touveaux, London; Messrs. Ferry and Co., Bristol; Friend of the Van Dwellers; F. F.

G.—Dr. H. C. Garth, Exminster; Mr. G. R. Gray, Worcester, Mass., U.S.A.; Glasgow Obstetrical and Gynæcological Society, Secretary of.

H.—Dr. W. Ainslie Hollis, Brighton; Mr. W. A. Hewitson, Hetton-le-Hole; Mr. J. Lawrence Hamilton, Brighton; Mr. W. D. Hayward, Croydon; Mr. J. Heywood, Manchester; Mr. E. H. Helby, London; Mr. Alex. T. Hunter, Edinburgh; Howard Association, London, Secretary of.

J.—Mr. B. E. Jones, Freckleton.

K.—Messrs. Knight and Co., London; Kent and Canterbury Hospital, Canterbury, Secretary of.

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M.—Dr. Harry Pike Major, Hungerford; Dr. H. W. McConnel, Barnstaple; Dr. J. A. Macdougall, Arin; Dr. B. H. Mumby, Portsmouth; Dr. George Murray, Newcastle-on-Tyne; Mr. G. H. Makins, London; Messrs. Morin and Seelig, London; Medical Defence Union, Secretary of; Midland Medical Society, Secretary of; Microscopical Society, London, Secretary of; Mildmay Mission Hospital, Resident Medical Officer of; M.D., West Brighton; Medicus, Kidderminster.

N.—Herr C. Norlander, Lund, Sweden; Nurses' Cooperation, London, Lady Superintendent of.

O.—Oldham Infirmary, Secretary of.

P.—Mr. J. Inglis Parsons, London; Mr. G. S. Passmore, London; Mr. Wm. Powell, Cheltenham; Mr. Morton P. Betts, London; Mr. Y. J. Pentland, Edinburgh; Paris, Our Correspondent; Premium, London.

R.—Dr. Robt. Reid Rentoul, Liverpool; Mr. C. H. Robinson, jun., Kingatown; Mr. T. W. Robbins, Marden; Mr. T. B. Russell, Liverpool; Mr. C. G. Rae, Edinburgh; Reading Pathological Society, Secretary of; Rome Our Correspondent.

S.—Dr. C. J. Sutherland, South Shields; Mr. W. R. H. Stewart, London; Surgeon-Captain R. R. Sleman, London; Mr. J. Barker Smith, London; Mr. M. E. E. Southman, London; Mr. H. Sell, London; Messrs. E. Smith and Co., London; Messrs. Shone and Ault, London; Springfield House Asylum, Bedford, Superintendent of; Sanitary Institute, London, Secretary of; Stafford General Infirmary, Secretary of; Sunderland Infirmary, Secretary of; Salvation Army, London, Secretary of; Situation, London.

T.—Dr. J. Roberts Thomson, Bournemouth; Mr. A. H. Tubby, London; Mr. H. Thompson, Hull; Mrs. Thomas, Eastbourne; Torquay Medical Society, Secretary of.

V.—Vienna, Our Correspondent.

W.—Dr. J. T. Windle, Ovenden; Dr. J. William, Bethesda; Mr. C. W. Willett, Isleworth; Messrs John Weiss and Son, London; Messrs. White, Druce and Brown, London; Whalley's Sanitary Fluid Co., Limited, London.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. McCall Anderson, Glasgow; Assistant, London; Anthrax, London; A. B., London.

B.—Dr. F. Beach, Sidcup; Mr. W. Beatt, Wingate; Dr. H. Brown, Amesbury; Mr. F. J. E. Bridger, London; Mr. R. H. Brockelbank, London; Messrs. Burgoyne, Burbidges and Co., London; Beta, London.

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D.—Mrs. Danby, Lincoln; Doctor, Sunderland; D., London.

E.—Dr. F. L. Ehrke, Surbiton; Mr. H. T. Eyre, Luton; Mr. J. A. Eyton-Jones, Wrexham; Ethmoid, London.

F.—Dr. C. O. Fowler, Thornton Heath; Dr. T. H. Foley, Kilkerrin; Dr. R. S. Ferguson, Chester-le-Street; Mr. J. W. Fry, Wateringbury; Mr. J. Fitzgerald, Queenstown; Mr. W. J. Fox, Chesterfield; Miss Ferguson, Broughty Ferry; F., Malvern.

G.—Mr. Griggs, Erith; Mr. J. P. Grieves, Almondsbury; Messrs. F. J. Gray and Son, Walsall; General Apothecaries' Co., London, Secretary of; Gerald, London.

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I.—Ibis, London.

J.—Mr. P. R. H. Jagannadham, Serampore, India; Mr. W. G. Jones, Leicester; Mr. Y. M. Jones-Humphreys, Cemmaes; Messrs. W. & A. K. Johnston, Edinburgh.

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N.—Dr. J. L. Notter, Southampton; Mr. E. North, West Brighton; Messrs. North and Son, London; 2, Nottingham-place, London.

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P.—Rev. E. Price, Bishop Auckland; Mrs. H. Poland, London; Messrs. Potter and Sacker, London; Purchaser, London.

R.—Dr. J. S. R. Russell, London; Mr. H. S. Reynolds, Melton Mowbray; Messrs. Randall Bros., Birmingham.

S.—Dr. W. J. Sinclair, Manchester; Dr. H. Shore, Banbury; Mr. F. Sydenham, Walsall; Mr. R. E. P. Squibbs, Bridgwater; Mrs. C. Smith, Southsea; Messrs. Stubbs and Co., London; St. Mary's Medical School, London, Secretary of; Syntax, London; Surgeon, London; Sigma, Manchester.

T.—Dr. W. E. Thomas, Ystrad Rhondda; Mr. L. Thelwall, Trefnant; Mr. T. W. Twyford, Hanley; T. H. H., London.

U.—Urbanus, London.

V.—Vaccine Lymph Association, London; Veras, London; Vindex, London; Vasey, Whitby.

W.—Dr. A. T. H. Waters, Liverpool; Mr. G. W. S. Wild, Bootle; Mr. J. W. Walton, Manchester.

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